INDEX TO SPECIAL NOTICE TO MARINERS PARAGRAPHS

* *Denotes significant change*

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(1) THE PRUDENT MARINER.

a. Warning On Use Of Floating Aids To Navigation and on Aids to Navigation in General and Fixing a Navigational Position.

The aids to navigation depicted on charts comprise a system consisting of fixed and floating aids with varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly a floating aid. An aid to navigation also refers to any device or structure external to a craft, designed to assist in determination of position. This includes celestial, terrestrial, and electronic means, such as Global Positioning System (GPS) and Differential GPS (DGPS). Here, too, the prudent mariner will not rely solely on any single aid to navigation.

The buoy symbol is used to indicate the approximate position of the buoy body and the sinker which secures the buoy to the seabed. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecisions in position fixing methods, prevailing atmospheric and sea conditions, the slope of and the material making up the seabed, the fact that buoys are moored to sinkers by varying lengths of chain, and the fact that buoy and/or sinker positions are not under continuous surveillance but are normally checked only during periodic maintenance visits which often occur more than a year apart. The position of the buoy body can be expected to shift inside and outside the charting symbol due to the forces of nature. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as the result of ice or other natural causes, collisions, or other accidents. Many of these factors also apply to articulated lights.

For the foregoing reasons, a prudent mariner must not rely completely upon the position or operation of floating aids to navigation, but will also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy marks.

b. Use of Foreign Charts.

In the interest of safe navigation, caution should be exercised in the use of foreign charts not maintained through U.S. Notice to Mariners.

Foreign produced charts are occasionally mentioned in NGA Sailing Directions when such charts may be of a better scale than U.S. produced charts. Mariners are advised that if or when such foreign charts are used for navigation it is their responsibility to maintain those charts from the Notice to Mariners of the foreign country producing the charts.

The mariner is warned that the buoyage systems, shapes, colors, and light rhythms used by other countries often have a different significance than the U.S. system.

Mariners are further warned about plotting positions, especially satellite-derived positions such as from GPS, onto foreign charts where the datum is unknown or the conversion from WGS-84 is unknown.

c. Chart Notes Regarding Different Datums.

Particular caution should be exercised during a passage when transferring the navigational plot to an adjacent chart upon a different geodetic datum or when transferring positions from one chart to another chart of the same area which is based upon a different datum. The transfer of positions should be done by bearings and distances from common features.

Notes on charts should be read with care, as they give important information not graphically presented. Notes in connection with the chart title include the horizontal geodetic datum which serves as a reference for the values of the latitude and longitude of any point or object on the chart. The latitudes and longitudes of the same points or objects on a second chart of the same area which is based upon a different datum will differ from those of the first chart. The difference may be navigationally significant. Additionally, datum changes between chart editions could significantly affect the positions of navigational aids found in the List of Lights and other NGA publications.

Positions obtained from satellite navigation systems, such as from GPS, are normally referred to the World Geodetic System 1984 (WGS-84) Datum. The differences between GPS satellite-derived positions and positions on some foreign charts cannot be determined: mariners are warned that these differences MAY BE SIGNIFICANT TO NAVIGATION and are therefore advised to use alternative sources of positional information, particularly when closing the shore or navigating in the vicinity of dangers.

d. Bilateral Charts

Starting in 2004, NGA commenced the process of adopting certain foreign charts into its paper chart inventory, with new NGA chart numbers applied, as existing NGA coverage is canceled. The resulting product is known as a “Bilateral Chart” and is marked Distribution Limited, available only to DoD and Government users. Commercial users of NGA paper charts for these areas will need to purchase them from private chart vendors. This process is part of the hardcopy transition strategy and is currently underway in Australia, Canada and the UK, with other countries to follow. See U.S. Notice to Mariners 51/05 for details.
(Supersedes NTM 1(1)05) (NGA/PVM)

(2) NAUTICAL CHART SYMBOLS AND ABBREVIATIONS INFORMATION.

Symbols and abbreviations approved for use on all regular nautical charts published by the National Geospatial-Intelligence Agency and the National Ocean Service are contained in the November 1997 edition of Chart No. 1, United States of America Nautical Chart Symbols, Abbreviations and Terms. This publication is available from the National Geospatial-Intelligence Agency and the National Ocean Service NOAA, and its sales agents and can be found on the NGA website. The introduction to this publication includes a number of paragraphs on metric and fathom charts, soundings, drying heights, shorelines, landmarks, buoys, IALA buoyage, heights, conversion scales, traffic separation schemes, and correction dates.

Buoys and Beacons of the IALA Buoyage System Regions A and B are illustrated in the back of Chart No. 1, including light characteristics in full color.

The various sections comprising the Table of Contents follow the sequence presented in The International Hydrographic Organization (IHO) Chart 1 (INT1); therefore, the numbering system in this publication follows the standard format approved and adopted by the IHO. Where appropriate, each page lists separately the current preferred U.S. symbols shown on charts of the National Ocean Service (NOS) and NGA. Also shown in separate columns are the IHO symbols and symbols used on foreign charts reproduced by NGA.

(Repetition NTM 1(2)05) (NGA/PVM)

(3) GEOGRAPHIC NAMES USAGE FOR NGA PRODUCTS.

Wherever possible, names used on NGA charts and in NGA publications are in the form approved by the United States Board on Geographic Names. Generally, local official spellings are used for those features entirely within a single sovereignty, while names of countries and those features which are common to two or more countries or which lie beyond single sovereignty carry Board-approved conventional spellings (i.e. names in common English language usage). When alternate names would be of value to the user, they may be shown for information purposes within parentheses. Important individual name changes are made to all revised charts as the opportunity permits. Geographic names or their spellings do not necessarily reflect recognition of the political status of an area by the United States Government.

(Repetition NTM 1(3)05) (NGA)

(4) INTERNATIONAL ICE PATROL SERVICE.

Between the months of February and August, the International Ice Patrol (IIP) conducts its annual mission of defining the limits of iceberg distribution in the northwest Atlantic and providing iceberg warnings to mariners. IIP determines iceberg distribution using iceberg sighting reports filed by ships and planes crossing the area. It also regularly conducts ice reconnaissance patrols to monitor the region of the Grand Banks of Newfoundland and define the southern, southeastern and southwestern limits of iceberg distribution in this dangerous region. Ice Patrol Bulletins are broadcast at various times via Voice, SITOR, NAVTEX, and Inmarsat-C SafetyNET, and through the Internet. Ice Patrol ice charts are broadcast via HF weather fax and through the Internet. Details are contained in Chapter 3 of Radio Navigational Aids, Pub. 117.

All shipping is requested to assist in the operation of the International Ice Patrol by reporting all ice sightings. Format and content of ice sighting messages are included in Pub. 117.

(Repetition NTM 1(4)05) (USCG)

(5) SPECIAL WARNINGS (In force 29 December 2005).

SPECIAL WARNING NO. 1.

Navigational warnings broadcast by NGA are normally divided into categories, HYDROLANTS and HYDROPACS, referring respectively to the Atlantic and Pacific Oceans. It has been determined there now exists a need for disseminating information of general interest not covered by the above categories. Therefore, with this message the Special Warnings series is reintroduced. The messages will be transmitted from all U.S. Navy and Coast Guard Stations broadcasting HYDROS.

(May 27, 1948)

SPECIAL WARNING NO. 29.

CUBA.

1. Mariners are advised to use extreme caution in transiting the waters surrounding Cuba. Within distances extending in some cases upwards of 20 miles from the Cuban coast, vessels have been stopped and boarded by Cuban authorities. Cuba vigorously enforces a 12-mile territorial sea extending from straight baselines drawn from Cuban coastal points. The effect is that Cuba’s claimed territorial sea extends in many cases beyond 12 miles from Cuba’s physical coastline.

(5) SPECIAL WARNINGS. (Continued).

2. The publication of this notice is solely for the purpose of advising United States mariners of information relevant to navigational safety and in no way constitutes a legal recognition by the United States of the validity of any foreign rule, regulation, or proclamation so published.

(March 1, 1962, updated January 1, 1982, reviewed November 9, 1994)

SPECIAL WARNING NO. 77.
PAPUA NEW GUINEA—BOUGAINVILLE COAST.

1. Bougainville Island declared unilateral independence from Papua New Guinea May 17, 1990. The government of Papua New Guinea does not recognize the declaration. Consequently, the political situation may be tense in the future.
2. The following Notice to Mariners No. 36/90 issued by the government of Papua New Guinea is quoted in its entirety:
   Quote
   Overseas vessels are advised to stand clear of the islands of Bougainville and Buka and to remain outside of territorial waters extending 12 nautical miles from the coast of Bougainville and immediately adjacent islands but excluding Solomon Islands territory, and excluding the groups of islands or atolls known as Feni, Green, Nuguria, Carteret (Kilinailau), Mortlock (Tauu) and Tasman (Nukumanu). Any vessel entering the waters adjacent to Bougainville or Buka will be subject to stop and search powers. This Notice to Mariners is effective immediately (22nd May 1990 EST) in respect to overseas shipping. Papua New Guinea
   coastal vessels will be restricted as of midnight local time on 20th May 1990. Restrictions will continue for an indefinite period. Charts affected are BA 214, BA 2766, BA 3419, BA 3420, BA 3830, BA 3994, INT 604 and AUS 4604. Dept. of Transport. Port Moresby. Papua New Guinea.
   Unquote
3. U.S. mariners are advised to exercise extreme caution in entering and transiting the waters of Bougainville.

(Dept. of State) (25 May 1990)

SPECIAL WARNING NO. 81.
LIBYA.

1. Due to unsettled relations between the United States Government and the government of Libya, U.S. mariners are advised to exercise caution in transiting the waters of the Gulf of Sidra south of 32-30N. The United States does not maintain an embassy in Libya and cannot ensure the safety of its citizens.
2. The publication of this notice is solely for the purpose of advising United States mariners of information relevant to navigational safety and in no way constitutes a legal recognition by the United States of the validity of any foreign rule, regulation or proclamation so published.
3. Cancel Special Warning No. 52.

(Dept. of State) (31 Aug 1990)

SPECIAL WARNING NO. 82.
MOROCCO.

1. U.S. mariners are advised to exercise caution within the territorial waters claimed by Morocco. Moroccan coastal protection warships, while engaged in anti-drug smuggling activities or enforcing territorial fishing rights, have been known to open fire on innocent vessels.
2. The publication of this notice is solely for the purpose of advising United States mariners of information relevant to navigational safety and in no way constitutes a legal recognition by the United States of the validity of any foreign rule, regulation or proclamation so published.

(Dept. of State) (31 Aug 1990)

SPECIAL WARNING NO. 89.
WEST COAST OF AFRICA—WESTERN SAHARA.

1. Prior to the September 1991 cease-fire between Morocco and the Polisario, unprovoked attacks on shipping off the coast of the Western Sahara by Polisario guerrillas using machine guns, grenades, and mortars occurred, resulting in the loss of life and property.
2. Despite the cease-fire, the potential for violent incidents still exists. Mariners are advised to continue using extreme caution and remain well offshore when transiting the waters off the west coast of Africa between 27-40N 013-11W and Cap-Blanc (Cabo Blanco) (20-47N 017-03W) and particularly between Dakhla (Ad Dakhla) (23-42N 015-56W) and Cape Corbiero (Cabo Corveiro) (21-48N 016-59W).

(5) SPECIAL WARNINGS. (Continued).

3. The publication of this notice is solely for the purpose of advising United States mariners of information relevant to navigation safety and in no way constitutes a legal recognition by the United States of the validity of any foreign rule, regulation, or proclamation so published.
4. Cancel Special Warning No. 69.

(Dept. of State) (16 Oct 1992)

SPECIAL WARNING NO. 92.
LIBERIA.

1. Mariners are advised to use caution when sailing near the coast of Liberia.
2. The United Nations Security Council has passed Resolution 788 (November 19, 1992), which says that "All states shall, for the purposes of establishing peace and stability in Liberia, immediately implement a general and complete embargo on all deliveries of weapons and military equipment to Liberia until the Security Council decides otherwise." Resolution 788 also "requests all states to respect the measures established by the Economic Community of West African States (ECOWAS) to bring about a peaceful solution to the conflict in Liberia."
3. Cancel Special Warning No. 90.

(Dept. of State) (03 Dec 1992, revised 29 Oct 1997)

SPECIAL WARNING NO. 95.
NICARAGUA.

1. Mariners operating small vessels such as yachts and fishing boats should note that Nicaragua has boundary disputes with its neighbors in both its Caribbean and Pacific waters, especially with Honduras, and should exercise caution. There have been cases of foreign-flagged fishing vessels and other vessels being seized off the Nicaraguan coast by Nicaraguan authorities. The government of Nicaragua has adopted a new law that mandates the payment of a fine equal to 200 percent of the value of any boat caught fishing illegally within Nicaragua's Exclusive Economic Zone (EEZ).
2. While in all cases passengers and crew have been released within a period of several weeks, in some cases the ships have been searched, personal gear and navigational equipment have been stolen, and there have been excessive delays in releasing vessels. Prompt U.S. Embassy consular access to detained U.S. citizens on Nicaragua's Caribbean coast may not be possible because of delays in notification due to the relative isolation of the region.
3. It should also be noted that there have been incidents of piracy in Caribbean and Pacific waters off the coast of Nicaragua, but the Nicaraguan navy has increased its patrols and no recent incidents have been reported.
4. Cancel Special Warning No. 91.

(Dept. of State) (10 Feb 1994, revised 29 Oct 1997)

SPECIAL WARNING NO. 107.
SRI LANKA.

1. Sri Lanka has announced that entrance by unauthorized vessels into the waters of Palk Strait and the eastern territorial waters of Sri Lanka is prohibited because of increased acts of terrorism against shipping and Sri Lankan Naval Vessels. Sri Lanka requires that vessels in the vicinity contact the Sri Lankan Command (Tel. 941-42-30-19, Fax: 941-433-986) for authorization if they wish to enter these areas.
2. The government also has established a restrictive zone in coastal waters along the west coast from Kalpitiya to Colombo Port's southern backwaters. Written permission from the Sri Lankan Command is required for entry into these waters as well. Sri Lankan authorities have advised that they will fire on violators.
3. The U.S. Embassy in Colombo reports that between July and September 1997, at least three foreign flag merchant vessels were attacked by the Liberation Tigers of Tamil Eelam (LTTE). One vessel operating as a passenger ferry off Mannar on the northwest coast was set on fire and sunk. A second vessel departing north from the Jaffna Peninsula was hijacked, stripped of equipment, and its crew temporarily held by the terrorists. One crew member was killed during the hijacking. A third vessel was loading a mineral cargo off the northeast coast near Pulmoddai when it was attacked and at least five members of its crew killed.
4. Any anti-shipping activity should be reported to NGA NAVSAFETY, U.S. State Department, or the nearest U.S. Consulate. Refer to NGA Pub. 117, Chapter 4, for instructions on filing a Ship Hostile Action Report (SHAR) or Anti-Shipping Activity Message (ASAM).

(5) SPECIAL WARNINGS. (Continued).

5. The publication of this notice is solely for the purpose of advising United States mariners of information relevant to navigational safety and in no way constitutes a legal recognition by the United States of the validity of any foreign rule, regulation or proclamation so published.
6. Cancel Special Warning No. 94.

(Dept. of State) (01 Dec 1997)

SPECIAL WARNING NO. 108.
SUDAN.

1. In January 1996 the Department of State warned all U.S. citizens against travel to Sudan due to ongoing violence within the country. Citing the U.S. Government's suspension of it's diplomatic presence in Sudan, the Department advised that its ability to provide emergency consular services would be severely limited. In August 1998 the State Department again warned U.S. citizens against travel to Sudan "following the recent U.S. air strikes against terrorist facilities and possible threats to Americans and American interests in that country." The latter warning (No. 98-041) remains in effect to date.
2. In November 1997 President Clinton issued Executive Order 13067 imposing a U.S. trade embargo against Sudan. Among the prohibited activities are "any transaction by a United States person relating to transportation of cargo to or from Sudan." "United States person" is defined as any U.S. citizen, permanent resident, entity organized under U.S. law, or person in the United States. The embargo is still in effect.
3. Notwithstanding the pre-existing travel warning and ongoing U.S. trade embargo, the recent U.S. missile attack on a chemical plant in Khartoum has raised concerns of possible retaliation against U.S. citizens and/or commercial interests. U.S. mariners are therefore urged to avoid Port Sudan or other Sudanese ports. U.S. vessels are also advised to remain well clear of Sudanese territorial waters in the western Red Sea area.

(Dept. of State) (20 October 1998)

SPECIAL WARNING NO. 113.
YEMEN.

1. The level of risk for foreigners in Yemen remains high. On 12 October 2000, several U.S. citizens were killed and many more were injured in an incident involving a U.S. Navy ship in the port of Aden, Yemen in what may have been a terrorist attack. An explosion in the morning of 13 October 2000 caused minor damage to the British Embassy in Sanaa, Yemen and no casualties. While U.S. and Yemeni officials are still cooperating closely to determine the cause of the tragic explosion, the investigation has only started. Under these circumstances, U.S. mariners should avoid Yemeni ports for the present.
2. In light of this and other recent events, the U.S. Department of State warns U.S. citizens to defer travel to Yemen. U.S. citizens should exercise a very high level of caution and should only travel between cities by air or with an armed escort. They should register with the U.S. Embassy in Sanaa and remain in contact with the Embassy for updated security information at (967) (1) 238-844 through 238-852.

(Dept. of State) (13 October 2000)

SPECIAL WARNING NO. 114.
IRAN.

1. Mariners are advised to exercise extreme caution when transiting the waters of the North Persian Gulf.
2. Iranian-flag speedboats and patrol craft operating in Iranian and international waters have boarded vessels and demanded payment before the vessels are allowed to proceed.
3. Mariners should exercise extreme caution and vigilance when operating in this area, and should obtain and evaluate current warning information broadcasted by the National Geospatial-Intelligence Agency (NGA) via HYDROPAC broadcasts.
4. Any anti-shipping activity should be reported to NGA NAVSAFETY Bethesda MD or navsafety@nga.mil via Ship Hostile Action Report (SHAR) procedures (see NGA Pub. 117-Chapter 4), or directly to the U.S. State Department, or nearest U.S. Embassy or Consulate.
5. The publication of this notice is solely for the purpose of advising U.S. mariners of information relevant to navigation safety, and in no way constitutes a legal recognition by the United States of the validity of any foreign rule, regulation, or proclamation so published.
6. Cancel Special Warning No. 104.

(Dept. of State) (05 February 2001)

(5) SPECIAL WARNINGS. (Continued).

SPECIAL WARNING NO. 115.
PERSIAN GULF.
1. In the Persian Gulf, multi-national naval units continue to conduct a maritime operation to intercept the import and export of commodities and products to/from Iraq that are prohibited by UN Security Council Resolutions 661 and 687.
2. Vessels transiting the Persian Gulf and Gulf of Oman can expect to be queried and, if bound for or departing from Iraq or the Shatt-al-Arab waterway, also intercepted and boarded. Safe navigation may require vessels to be diverted to a port or anchorage prior to conducting an inspection.
3. Maritime interception operations in the Red Sea, Strait of Tiran and Strait of Hormuz have ceased. Cargo bound for Aqaba or transshipment from Aqaba may be inspected on shore according to an agreement worked out by the UN Sanctions Committee and Jordanian authorities.
4. Documentation requirements for the naval regime in the Persian Gulf and the shore-based regime in Aqaba are identical and can be found in the most recent HYDRPOACS covering the enforcement of UN sanctions against Iraq.
5. Stowage and other requirements for vessels transiting the Persian Gulf can also be found in the most recent HYDROPACS covering the UN sanctions against Iraq.
6. Ships which, after being intercepted, are determined to be in violation of UN Security Council Resolution 661 will not be allowed to proceed with their planned transit.
7. The intercepting ship may use all available communications, primarily VHF Channel 16, but including International Code of Signals, flag hoists, other radio equipment, signal lamps, loudspeakers, bow shots, and other appropriate means to communicate directions to a ship.
8. Failure of a ship to proceed as directed will result in the use of the minimum level of force necessary to ensure compliance.
9. Any ships, including waterborne craft and armed merchant ships, or aircraft, which threaten or interfere with multinational forces engaged in enforcing a maritime interception may be considered hostile.
10. Cancel Special Warning No. 100.

(Dept. of State) (16 Feb 2001)

SPECIAL WARNING NO. 116.
PAKISTAN.
1. Mariners calling on Pakistan are advised that levels of sectarian and factional violence remain high. Karachi, the main port, continues to be affected by politically-motivated killings.
2. On March 8, 1995, unknown assailants opened fire on an official U.S. Consulate shuttle in Karachi, killing two embassy employees and wounding a third.
3. Anti-American sentiment can be provoked easily and spontaneously in response to international events that radicals misconstrue as directed against Islam. For example, the UN resolution on sanctions against Afghanistan resulted in sporadic anti-American protests.
4. Port facilities and vessels may offer targets of opportunity for terrorist attacks. U.S. mariners are advised to exercise heightened security awareness and prudent security precautions when in Pakistani ports and waters.
5. Cancel Special Warning No. 102.

(Dept. of State) (05 March 2001)

SPECIAL WARNING NO. 117.
ALGERIA.
1. Due to the potential for domestic unrest and anti-foreign violence, U.S. mariners are advised to exercise extreme caution when in Algerian waters. Although there has only been one attack against foreigners since 1997, the level of risk in Algeria remains high.
2. Attacks against maritime vessels in Algerian ports have taken place several years ago. The U.S. Embassy in Algiers specifically identifies ports, train stations (trains), and airline terminals as terrorist targets. Commercial shipping should remain on maximum alert when in Algerian waters and maintain adequate security precautions.
3. The Department of State recommends that U.S. citizens evaluate carefully the implications for their security and safety before deciding to travel to Algeria, and that Americans in Algeria whose circumstances do not afford them effective (armed) protection depart the country. Americans arriving in the country should not disembark and travel within the country without adequate, including armed, protection immediately upon arrival.
4. Cancel Special Warning No. 103.

(Dept. of State) (05 March 2001)

(5) SPECIAL WARNINGS. (Continued).

SPECIAL WARNING NO. 118.
LEBANON.
1. The U.S. Department of State warns U.S. citizens, including U.S. mariners, of the risks of travel to Lebanon and recommends that Americans exercise caution while traveling there. During Lebanon's civil conflict from 1975 to 1990, Americans were targets of numerous terrorist attacks in Lebanon. While there have been very few such incidents in recent years, the perpetrators of these attacks are still present in Lebanon and retain the ability to act.
2. The local security environment can limit the movement of U.S. officials in certain areas of the country. This factor, plus limited staffing, may prevent the U.S. Embassy from performing full consular functions and providing timely assistance to U.S. citizens in Lebanon. Dual nationals and spouses of Lebanese citizens can encounter particular difficulties, and should see the Department of State Consular Information Sheet on Lebanon. U.S. citizens who travel to Lebanon despite this warning should exercise extreme caution. U.S. citizens traveling to Lebanon are encouraged to register at the U.S. Embassy in Beirut.
3. The security situation may change rapidly, and visitors to Lebanon should monitor the news for reports of incidents that might affect their personal safety.
4. Cancel Special Warning No. 71.

(Dept. of State) (09 March 2001)

SPECIAL WARNING NO. 119.
SIERRA LEONE.
1. Mariners are strongly advised not to use any ports in Sierra Leone except for the port of Freetown, which is currently considered to provide safe harborage. Mariners should note that the Department of State warns U.S. citizens against travel to Sierra Leone. Although the security situation in Freetown has improved somewhat, areas outside the capital are still very dangerous.
2. The Department of State has terminated the ordered departure status of U.S. Government personnel in non-emergency positions. However, the U.S. Embassy in Freetown currently operates with a reduced staff. Only emergency consular services to U.S. citizens are available, and the Embassy's ability to provide these services is limited. U.S. citizens in Sierra Leone should review their own personal security situations in determining whether to remain in the country.
3. Cancel Special Warning No. 109.

(Dept. of State) (16 March 2001)

SPECIAL WARNING NO. 120.
WORLDWIDE.
1. Due to recent events in the Middle East and the American homeland, U.S. forces worldwide are operating at a heightened state of readiness and taking additional defensive precautions against terrorist and other potential threats. Consequently, all aircraft, surface vessels, and subsurface vessels approaching U.S. forces are requested to maintain radio contact with U.S. forces on Bridge-to-Bridge Channel 16, international air distress (121.5 MHz VHF) or MILAIR distress (243.0 MHz UHF).
2. U.S. forces will exercise appropriate measures in self-defense if warranted by the circumstances. Aircraft, surface vessels, and subsurface vessels approaching U.S. forces will, by making prior contact as described above, help make their intentions clear and avoid unnecessary initiation of such defensive measures.
3. U.S. forces, especially when operating in confined waters, shall remain mindful of navigational considerations of aircraft, surface vessels, and subsurface vessels in their immediate vicinity.
4. Nothing in the special warning is intended to impede or otherwise interfere with the freedom of navigation or overflight of any vessel or aircraft, or to limit or expand the inherent self-defense rights of U.S. forces. This special warning is published solely to advise of the heightened state of readiness of U.S. forces and to request that radio contact be maintained as described above.

(Dept. of State) (16 November 2001)

SPECIAL WARNING NO. 121.
PERSIAN GULF.
1. Coalition naval forces may conduct military operations in the Eastern Mediterranean Sea, Red Sea, Gulf of Aden, Arabian Sea, Gulf of Oman, and Arabian Gulf. The timely and accurate identification of all vessels and aircraft in these areas are critical to avoid the inadvertent use of force.

(5) SPECIAL WARNINGS. (Continued).

2. All vessels are advised that Coalition naval forces are prepared to exercise appropriate measures in self-defense to ensure their safety in the event they are approached by vessels or aircraft. Coalition forces are prepared to respond decisively to any hostile acts or indications of hostile intent. All maritime vessels or activities that are determined to be threats to Coalition naval forces will be subject to defensive measures, including boarding, seizure, disabling or destruction, without regard to registry or location. Consequently, surface vessels, subsurface vessels, and all aircraft approaching Coalition naval forces are advised to maintain radio contact on Bridge-to-Bridge Channel 16, international air distress (121.5 MHz VHF) or military air distress (243.0 MHz UHF).
3. Vessels operating in the Middle East, Eastern Mediterranean Sea, Red Sea, Gulf of Oman, Arabian Sea, and Arabian Gulf are subject to query, being stopped, boarded and searched by US/Coalition warships operating in support of operations against Iraq. Vessels found to be carrying contraband bound for Iraq or carrying and/or laying naval mines are subject to detention, seizure and destruction. This notice is effective immediately and will remain in effect until further notice.

(Dept. of State) (20 March 2003)

SPECIAL WARNING NO. 122.
EAST AFRICA.

As of early 2005, the United States Government has received unconfirmed information that terrorists may attempt to mount a maritime attack using speedboats against a Western ship possibly in East Africa. This information is unconfirmed and the United States is not aware of additional information on the planning, timing, or intended targets of the maritime attack.
(Dept. of State) (11 March 2005)

SPECIAL WARNING NO. 123.
SOMALIA.

1. Due to continuing conditions of armed conflict and lawlessness in Somalia and waters off its coast, mariners are advised to avoid the Port of Muqdisho (Mogadishu) and to remain at least 200 nautical miles distant from the Somali coast. The U.S. Government does not have an Embassy in Somalia and cannot provide services to US citizens.
2. Recent vessel hijackings off the east coast of Somalia demonstrate that pirates are able to conduct at sea hijackings from as far south as Kismaayo (Chisimayu) (00-22S) - though vessels are advised to transit no closer than 02-00S - to as far north as Eyl (08-00N), and out to a distance of 170 miles. The first known attempt to hijack a cruise vessel occurred in November 2005. All merchant vessels transiting the coast of Somalia, no matter how far offshore, should increase anti-piracy precautions and maintain a heightened state of vigilance. Pirates are reported to have used previously hijacked ships as bases for further attacks.
3. Another reported pirate tactic has been to issue a false distress call to lure a ship close inshore. Therefore, caution should be taken when responding to distress calls keeping in mind it may be a tactic to lure a vessel into a trap.
4. Victimized vessels have reported two to three (2-3) speedboats measuring six to nine meters (6-9M) in length. Each vessel has a crew of three to six (3-6) armed men with AK-47s and shoulder launched rockets, which are opening fire on vessels in broad daylight in order to intimidate them into stopping.
5. To date, vessels that increase speed and take evasive maneuvers avoid boarding while those that slow down are boarded, taken to the Somali coastline, and released after successful ransom payment, often after protracted negotiations of as much as 11 weeks.
6. Cancel Special Warning number 111.

(Dept. of State) (11 November 2005)

SPECIAL WARNINGS FOOTNOTE.
In January 1977, DMA now NGA commenced issuing warnings as NAVAREAS IV and XII broadcasts in addition to the HYDROLANT and HYDROPAC series.
(Supersedes NTM 1(5)05) (NGA/DEPT. OF STATE)

(6) TRADE WITH CUBA.

The President of the United States proclaimed an embargo February 7, 1962 on all trade with Cuba. Except as authorized by Department of Treasury regulations or license, all dealings in property in which Cuba or a Cuban national has an interest (including all financial transactions in Cuba) by any person subject to U.S. jurisdiction are prohibited. Unless otherwise authorized by the Department of Treasury, it is unlawful for any person subject to the jurisdiction of the United States to transport, import, or otherwise deal in or engage in any transaction with respect to any merchandise outside the United States if such merchandise: (1) is of Cuban origin; (2) is or has been located in or transported from or through Cuba; or (3) is made or

(6) TRADE WITH CUBA. (Continued).

derived in whole or part from any Cuban growth, produce, or manufacture. It is also unlawful for any person subject to U.S. jurisdiction to engage in any transportation of goods or merchandise from anywhere to Cuba unless the following conditions are met: (1) such transportation is licensed or otherwise authorized by Treasury; and (2) if U.S. goods or merchandise are involved, the exportation is itself licensed or otherwise authorized by the Department of Commerce under the provisions of the Export Administration Act of 1979, as amended. Licenses or authorizations to engage in such trade will not normally be granted. Certain exceptions exist for trade in informational materials. Unless licensed by Treasury, no vessel may enter a U.S. port for any purpose including bunkering or the acquisition of ship's stores if there are on board goods or passengers coming from, or going to, Cuba, or goods in which Cuba or a Cuban national has an interest. Unless licensed by Treasury, no vessel which enters a port or place in Cuba to engage in the trade of goods or services may, within 180 days of such vessel's departure from such port or place in Cuba, load or unload freight at any place in the United States. Persons who violate these restrictions may be subject to criminal or civil sanctions, or both, and vessels involved in such trade contrary to law may be subject to seizure and forfeiture (reviewed November 12, 1998).
(Repetition NTM 1(6)05) (DEPT. OF STATE)

(7) AMVER.

The Internet website for Amver is: www.amver.com. The Amver system, maintained and administered by the United States Coast Guard, with the cooperation of coast radio stations of many nations, is a global ship reporting system for search and rescue (SAR) which provides important aid to the development and coordination of SAR efforts in the offshore areas of the world. Vessels of all nations, on the high seas, are encouraged to voluntarily send movement (sailing) reports and periodic position reports to the Amver Center located in Martinsburg, West Virginia, via selected radio stations and coast earth stations.

Information from these reports is entered into a computer database which is used to generate and maintain dead reckoning positions. Characteristics of vessels which are valuable for determining SAR capability are also entered into the computer from available sources of information. Information concerning the predicted location and SAR characteristics of each vessel estimated to be in the search area of interest is made available, upon request and only to recognized SAR agencies of any nation, or vessels needing assistance. Predicted locations are only disclosed for reasons related to maritime safety.

Messages sent within the Amver system are at no cost to the ship owner. Benefits to shipping include: improved chances of aid in emergencies, reduced number of calls for assistance by vessels not favorably located to assist, and reduced time lost by vessels responding to calls for assistance. An Amver participant is under no greater obligation to render assistance during an emergency than a vessel that is not participating.

Instructions on participation in the Amver system are available on the website in the following languages: Chinese, Danish, Dutch, English, French, German, Greek, Italian, Japanese, Korean, Norwegian, Philippine, Polish, Portuguese, Russian, Serbo-Croatia, Spanish, and Swedish. Additional information is available from:

Amver Maritime Relations Office
USCG Battery Park Building
1 South Street
New York, NY 10004-1499
U.S.A.

Telephone: (212) 668-7762
Fax: (212) 668-7684
E-mail: bmstrong@batteryny.uscg.mil

In addition to its Internet web page, other sources of information on Amver include U.S. Coast Guard Area and District Offices or Captain of the Port Offices.

Amver reports can be sent at no cost to the ship if sent via Inmarsat-C using the Amver/SEAS software and designated Telenor land earth stations. Necessary equipment includes: a Windows based PC with an operating system of Windows 2000, Windows NT, Windows 98, Windows 95 (works best with 200 MHz Pentium or better); video card that supports 800 x 600 pixels, with 65K colors or better; 10 MB of free hard disk space, and a 3.5 inch floppy disk drive. Additionally, an Inmarsat Standard C transceiver with a 3.5 inch floppy disk drive and capability to transmit a binary file is required as well. Amver/SEAS software is available through the National Oceanic and Atmospheric Administration (NOAA) web page at:
http://seas.amverseas.noaa.gov/seas/.
(Supersedes NTM 1(07)05) (USCG)

(8) INTERNATIONAL AERONAUTICAL AND MARITIME SEARCH AND RESCUE (IAMSAR) MANUAL.

The International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume III, Mobile Facilities is to be carried onboard Safety Of Life At Sea (SOLAS)-compliant merchant vessels and is intended to be carried aboard other vessels, aircraft, and rescue units to help with performance of a search, rescue or on-scene coordinator function, and with aspects of search and rescue that pertain to their own emergencies. This Manual can be purchased directly from the International Maritime Organization (IMO) or from selected book sellers around the world as provided under "Publication Catalogue" on IMO web page: www.imo.org. It is available in the English, French, and Spanish languages and will also be published in Russian, Chinese, and Arabic languages by the IMO or other sources. Amendments have been issued to this publication and can be obtained through the IMO.
(Repetition NTM 1(8)05) (USCG)

(9) SPECIAL REPORTING INSTRUCTIONS FOR U.S. FLAG VESSELS, VESSELS CARRYING WAR RISK INSURANCE, AND CERTAIN OTHER DESIGNATED VESSELS (Formerly USMER Vessels).

According to a U.S. Maritime Administration regulation effective 1 August 1983, U.S. flag vessels and foreign-flag "War Risk" vessels must report and regularly update their voyages to the Amver Center.

Who Must Report

A. U.S.-flag vessels of one thousand gross tons or more, operating in foreign commerce.
B. Foreign-flag vessels of one thousand gross tons or more, for which an Interim War Risk Insurance binder has been issued under the provisions of Title XXI, Merchant Marine Act, 1936.

Who May Report

Other merchant vessels, when approved by MARAD, whose owners may have chosen to participate and to have voyage information forwarded to MARAD. (Other merchant vessels may participate in Amver, but information provided by them will be released only for safety purposes or to satisfy certain advance arrival notification requirements of Title 33, Code of Federal Regulations.)

When to Report

A. Sailing plans may be sent days or even weeks prior to departure, but no later than departure.
B. Departure Report must be sent as soon as practicable upon leaving port.
C. Position Report must be sent within twenty-four hours of departure, and subsequently no less frequently than every forty-eight hours until arrival.
D. Arrival Report must be sent immediately prior to or upon arrival at the Port of Destination.
E. Reports are to be sent during the Radio Officer's normal duty hours, but no later than the above schedule.
F. At the discretion of the vessel, reports may be sent more frequently than the above schedule, as, for example, in heavy weather or under other adverse conditions.

(Repetition NTM 1(9)05) (USCG)

(10) URGENCY AND SAFETY SIGNALS.

The radiotelephone urgency signal, which is the group of words PAN PAN (pronounced "Pahn-Pahn") spoken three times, is provided for use in cases in which a ship making a call has a very urgent message to transmit concerning the safety of a ship, aircraft, or other vehicle, or the safety of a person, but it does not necessarily imply that the ship is in imminent danger or requires immediate assistance. The call has priority over all other communications except distress calls and it should be used in all urgent cases in which the sending out of the SOS or MAYDAY signal is not fully justified.

The urgency signal and message may be addressed to all stations or to a specific station. The urgency signal may also be used when the Master of a ship desires to issue a warning that circumstances are such that it may become necessary for him to send out the distress signal at a later stage. The message must be canceled as soon as any action is no longer necessary.

The radiotelephone SAFETY signal "SECURITE" (pronounced "SAY-CUR-E-TAY") spoken three times, is provided for reporting hazards to navigation or meteorological warnings including dangers regarding ice, derelicts, tropical storms, etc.
(Repetition NTM 1(10)05) (USCG)

(11) SUBMARINE EMERGENCY IDENTIFICATION SIGNALS AND HAZARD TO SUBMARINES.

1. U.S. submarines are equipped with signal ejectors which may be used to launch identification signals, including emergency signals. Two general types of signals may be used: smoke floats and flares or stars. A combination signal which contains both smoke and flare of the same color may also be used. The smoke floats, which burn on the surface, produce a dense, colored smoke for a period of fifteen to forty-five seconds. The flares or stars are propelled to a height of three hundred to four hundred feet from which they descend by small parachute. The flares or stars burn for about twenty-five seconds. The color of the smoke or flare/star has the following meaning:
   a) GREEN-Used under training exercise conditions only to indicate that a torpedo has been fired or that the firing of a torpedo has been simulated.
   b) YELLOW-Indicates that submarine is about to come to periscope depth from below periscope depth. Surface craft terminate antisubmarine counter-attack and clear vicinity of submarine. Do not stop propellers.
   c) RED-Indicates an emergency condition within the submarine and that it will surface immediately, if possible. Surface ships clear the area and stand by to give assistance after the submarine has surfaced. In case of repeated red signals, or if the submarine fails to surface within reasonable time, she may be assumed to be disabled. Buoy the location, look for submarine buoy and attempt to establish sonar communications. Advise U.S. Naval authorities immediately.
   d) WHITE-Two white flares/smoke in succession indicates that the submarine is about to surface, usually from periscope depth (non-emergency surfacing procedure). Surface craft should clear the vicinity of the submarine.
2. A Submarine Marker Buoy consists of a cylindrically shaped object about 3 feet by 6 feet with connecting structure and is painted international orange. The buoy is a messenger buoy with a wire cable to the submarine; this cable acts as a downhaul line for a rescue chamber. The buoy may be accompanied by an oil slick release to attract attention. A submarine on the bottom in distress and unable to surface will, if possible, release this buoy. If an object of this description is sighted, it should be investigated and U.S. Naval Authorities advised immediately.
3. Transmission of the International Distress Signal (SOS) will be made on the submarine's sonar gear independently or in conjunction with the red emergency signal as conditions permit.
4. Submarines may employ any or all of the following additional means to attract attention and indicate their position while submerged:
   a) Release of dye marker.
   b) Ejection of oil.
   c) Release of air bubble.
   d) Pounding on the hull.
5. United States destroyer-type vessels in international waters will, on occasion, stream a towed underwater object at various speeds engaged in naval maneuvers. All nations operating submarines are advised that this underwater object in the streamed condition constitutes a possible hazard to submerged submarines.

(Repetition NTM 1(11)05) (U.S. NAVY)

(12) RULES, REGULATIONS AND PROCLAMATIONS ISSUED BY FOREIGN GOVERNMENTS.

The National Geospatial-Intelligence Agency, as a means of promoting maritime safety, includes in its publications rules, regulations, and proclamations affecting navigation as issued by foreign nations.

In this connection, it should be clearly understood that the publication of such material is solely for information relative to the navigational safety of shipping, and in no way constitutes a legal recognition by the United States of the international validity of any rule, regulation, or proclamation so published. While every effort is made to publish all such information, the National Geospatial-Intelligence Agency cannot assume any liability for failure to publish any particular rule, regulation, proclamation, or the details thereof.

(Repetition NTM 1(12)05) (NGA/PVM)

(13) WARNING-DANGER FROM SUBMARINE CABLES AND PIPELINES.

Submarine cables or pipelines pass beneath various navigable waterways throughout the world. Installation of new submarine cables and pipelines may be reported in the Notice to Mariners; their locations may or may not be charted. Where feasible, warning signs are often erected to warn the mariners of their existence. In view of the serious consequences resulting from damage to submarine cables and pipelines, vessel operators should take special care when anchoring, fishing or engaging in underwater operations near areas where these cables or pipelines may exist or have been reported to exist.

(13) WARNING-DANGER FROM SUBMARINE CABLES AND PIPELINES. (Continued).

Certain cables carry high voltages; many pipelines carry natural gas under high pressure or petroleum products. Electrocution, fire or explosion with injury or loss of life or a serious pollution incident could occur if they are penetrated. Vessels fouling a submarine cable or pipeline should attempt to clear without undue strain. Anchors or gear that cannot be cleared should be slipped; no attempt should be made to cut a cable or pipeline.
(Repetition NTM 1(13)05) (USCG)

(14) CAUTION-CLOSE APPROACH TO MOORED OFFSHORE AIDS TO NAVIGATION.

Courses should invariably be set to pass these aids with sufficient clearance to avoid the possibility of collision. Errors of observation, current and wind effects, other vessels in the vicinity, and defects in steering gear may be, and have been, the cause of collisions. Experience shows that buoys cannot be safely used as leading marks to be passed close aboard, and should always be left broad off the course whenever sea room permits.

It should be borne in mind that most large buoys are anchored to a very long scope of chain and, as a result, the radius of their swinging circle is considerable. The charted position is the approximate location. Furthermore, under certain conditions of wind and current, they are subject to sudden and unexpected sheers which are certain to hazard a vessel attempting to pass close aboard.

Further warning on use of floating aids to navigation for position taking is contained in paragraph 1 of this Notice. When approaching an offshore light structure, large navigational buoy, or a station on a submarine site, on radio bearings, the risk of collision will be lessened by ensuring that the radio bearing does not remain constant.
(Repetition NTM 1(14)05) (USCG)

(15) PIPELINE LAYBARGES AND JETBARGES.

With the increased number of pipeline laying operations in the Gulf of Mexico and other areas, operators of all types of vessels should be aware of the dangers of passing close aboard, close ahead, or close astern of a jetbarge or pipelaying barge. Pipelaying barges and jetbarges usually move at 1/2 knot or less and have anchors which extend out approximately 3500-5000 feet in all directions, and may be marked by lighted anchor buoys. The exposed pipeline behind the pipelaying barge and the areas in the vicinity of anchors are hazardous to navigation and should be avoided. The pipeline and anchor cables also represent a submerged hazard to navigation. It is suggested, if safe navigation permits, for all types of vessels to pass well ahead of the pipelaying barge or well astern of the jetbarge. The pipelaying barge, jetbarge, and attending vessels may be contacted on VHF-FM Channel 16 for passage instructions.
(Repetition NTM 1(15)05) (USCG)

(16) REQUIRED REPORTING OF DAMAGED U.S. AIDS TO NAVIGATION.

It frequently occurs that aids to navigation are collided with, causing damage and displacement, or complete loss, without the knowledge of the Coast Guard District Commander. The replacement or repair of such aids is consequently often not made as promptly as desired. This situation results in diminished protection for marine traffic, and is attributable in large part to the failure of vessel operators to furnish notice of these collisions to the nearest local or district office of the U.S. Coast Guard, or to Coast Guard Headquarters, as required by law and regulation. The prompt submission of notice of any marine casualty or accident, including damage or destruction of aids to navigation, is required by the Marine Investigation Regulations, Section 4.05-20 of Title 46, Code of Federal Regulations, with penalty for noncompliance.
(Repetition NTM 1(16)05) (USCG)

(17) OIL POLLUTION-COMPLIANCE WITH THE CLEAN WATER ACT.

The Federal Water Pollution Control Act (FWPCA) prohibits the discharge of quantities of either oil or hazardous substances which may be harmful into or upon the navigable waters of the United States. This prohibition also applies to adjoining shorelines, waters of the contiguous zone, activities connected with the Outer Continental Shelf Lands Act (OSLA) and Deepwater Port Act of 1974, and such discharges which may affect natural resources belonging to the United States or under its exclusive management authority, including those resources under the Fishery Conservation and Management Act of 1976. Furthermore, in the event a spill does occur in violation of the Act the person in charge of a vessel or onshore or offshore facility is required to notify the Coast Guard as soon as he has knowledge of the spill. Such notification is to be by the most rapid means available to the National Response Center (1-800-424-8802, nationwide 24 hour number).
(Repetition NTM 1(17)05) (USCG)

(18) COMPLIANCE WITH THE ACT TO PREVENT POLLUTION FROM SHIPS.

The Act to Prevent Pollution from ships (33 U.S.C. 1901) implements into U.S. law the International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 (MARPOL 73/78). Under the Act, the U.S. Coast Guard is responsible for inspecting and certifying that U.S. vessels meet the applicable requirements. Annex I of MARPOL 73/78 deals with oil and oily waste, Annex II with hazardous chemicals and other substances referred to as Noxious Liquid Substances (NLS), and Annex V deals with the prevention of marine pollution by plastics and other garbage produced during vessel operations.

Annex I of MARPOL 73/78 is applicable to oceangoing tankers over 150 gross tons and all other oceangoing ships over 400 gross tons. The MARPOL 73/78 requirements include oily waste discharge limitations, oily-water separating equipment, monitoring and alarm systems for discharges from cargo areas, cargo pump rooms and machinery space bilges. Ships to which Annex I MARPOL 73/78 is applicable are also required to have an International Oil Pollution Prevention (IOPP) Certificate verifying that the vessel is in compliance with the requirements of MARPOL 73/78 and that any required equipment is on board and operational. Vessels must also maintain an Oil Record Book recording all oil transfers and discharges. The Oil Record Book was updated in 2005 and is available through any local Captain of the Port/Officer in Charge, Marine Inspection. Vessel operators are emcouraged to obtain and use the latest edition of the Oil Record Book (Rev 02-05).

Annex II of MARPOL 73/78 is applicable to oceangoing vessels and non-self propelled oceangoing ships which carry Noxious Liquid Substances (NLS) in bulk. The Annex II requirements include discharge restrictions for various classes of cargo residues; the maintenance of a Cargo Record Book for recording all NLS cargo and residue transfers and discharges; and a Procedures and Arrangements Manual describing the correct procedures for off loading and prewashing cargo tanks.

Annex II NLS cargoes are classified in one of four categories, A, B, C, or D. Category A is the most hazardous to the environment. Category A and other substances which tend to solidify in tanks must be prewashed in port under the supervision of a Prewash Surveyor prior to departure from the off loading terminal. Vessel discharges must be underwater when discharge at sea is allowed. Tanks which carry Category B and C NLS must be tested to ensure that after tank stripping only a minimal amount of residues will remain. Reception facilities must be able to assist in cargo stripping operations by reducing back pressure during the final stages of off loading.

Terminals and ports receiving oceangoing tankers, or any other oceangoing ships of 400 GT or more, carrying residues and mixtures containing oil, or receiving oceangoing ships carrying NLSs, are required to provide adequate reception facilities for the wastes generated. Coast Guard Captains of the Port issue a Certificate of Adequacy to terminals or ports to show that they are in compliance with federal reception facility requirements. An oceangoing tanker or any other oceangoing ship of 400 GT or more required to retain oil or oily residues and mixtures on board and an oceangoing ship carrying a Category A, B or C NLS cargo or NLS residue in cargo tanks that are required to be prewashed, may not enter any port or terminal unless the port or terminal holds a valid Certificate of Adequacy or unless the ship is entering under force majeure.

Annex V is applicable to all recreational, fishing, uninspected and inspected vessels, and foreign flag vessels on the navigable waters and all other waters subject to the jurisdiction of the United States, out to and including the Exclusive Economic Zone (200 miles).

Annex V prohibits the disposal of any and all plastic material from any vessel anywhere in the marine environment. Dunnage, lining and packing materials which float may be disposed of beyond 25 miles from the nearest land. Other garbage that will not float may be disposed of beyond 12 miles of land, except that garbage which can pass through a 25mm mesh screen (approximately 1 square inch) may be disposed of beyond 3 miles. Dishwater is not to be considered garbage within the meaning of Annex V when it is the liquid residue from the manual or automatic washing of dishes or cooking utensils. More restrictive disposal regimes apply in waters designated “Special Areas.” This Annex requires terminals to provide reception facilities at ports and terminals to receive plastics and other garbage from visiting vessels.

Annex VI, Regulations for the Prevention of Air Pollution from Ships, sets limits on sulphur oxide (SOx) and nitrogen oxide (NOx) emissions from ship exhausts and prohibits deliberate emissions of ozone-depleting substances. These regulations include a global cap of 4.5% m/m on the sulphur content of fuel oil and calls on IMO to monitor the worldwide average sulphur content of fuel. Annex VI entered into force internationally on May 19, 2005. The Annex has not been ratified yet by the United States, but the Coast Guard implemented a voluntary policy (MOC Policy Letter 05-02) until the expected ratification occurs. Upon U.S. ratification, the Annex will become mandatory. Addtionally, certain regions may be declared as Sulfur Emission Control Areas (SECA). In these areas, the sulphur content of fuel oil used on board ships must not exceed

(18) COMPLIANCE WITH THE ACT TO PREVENT POLLUTION FROM SHIPS. (Continued).

1.5% m/m. Alternatively, ships must fit an exhaust gas cleaning system or use other technological methods to limit SOx emissions. The Baltic Sea and North Sea Areas have already been designated as SECAs.

A mandatory NOx Technical Code defines how set limits on NOx emissions shall be achieved.

Annex VI prohibits deliberate emissions of ozone depleting substances, which include halons and chlorofluorocarbons (CFCs). New installations containing ozone-depleting substances are prohibited on all ships. But new installations containing hydro-chlorofluorocarbons (HCFCs) are permitted until 1 January 2020. The Annex also prohibits the incineration on board ships of certain products, such as contaminated packaging materials and polychlorinated biphenyls (PCBs).

MARPOL 73/78 requires the immediate reporting of any unpermitted discharges of oil or other substances. The civil penalty for each violation of MARPOL 73/78 is not more than $25,000 per day. The criminal penalty for a person who knowingly violates the MARPOL Protocol, or the regulations (33 CFR 151, 155, 157, and 158), consists of a fine of not more than $250,000 and/or imprisonment for not more than 5 years; U.S. law also provides criminal penalties up to $500,000 against organizations which violate MARPOL.

International Safety Management (ISM) Code Implementation: Compliance with the ISM Code is mandatory for passenger ships, cargo ships, bulks carriers, and oil and chemical tankers, gas carriers, as well as high speed craft and MODUs over 500 GT engaged on international voyages. To demonstrate compliance, vessels must present copies of approved Documents of Compliance and Safety Management Certificates to Coast Guard Port State control Boarding Officers during routine compliance examinations. ISM compliance demonstrates that vessel operators have safety and environmental policies, emergency response procedures, designated accident and code non-conformity reporting procedures, and on board maintenance and operating manuals. If inbound vessels are not in compliance with the ISM Code, they will be denied entry into U.S. waters.
(Supersedes NTM 1(18)05) (USCG)

(19) PACKAGED MARINE POLLUTANTS-COMPLYING WITH MARPOL ANNEX III.

On October 1, 1993, new regulations under the Hazardous Materials Transportation Act (HMTA) took effect, implementing MARPOL Annex III in the United States. MARPOL Annex III deals with the prevention of marine pollution by harmful substances in packaged form.

Annex III of MARPOL 73/78 applies to all ships carrying harmful substances in packaged form. Annex III provides standards for stowage, packing, labeling, marking, and documentation of substances identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code). On 5 November 1992, the U.S. Research and Special Programs Administration (RSPA) amended the Hazardous Materials Regulations (HMR, 49 CFR 100-177) to list and regulate these marine pollutants in all modes of transportation. Under the HMR, marine pollutants are listed in a separate appendix, and a “marine pollutant mark” is required for those materials. The marine pollutant mark is used in addition to any existing labels or placards designating a hazardous substance.

Marine pollutants are divided into two classes: marine pollutants and severe marine pollutants. A solution or mixture containing 10% or more of any marine pollutant falls into the class of “marine pollutant.” The “severe marine pollutant” class consists of those materials that contain 1% or more of any specified “severe marine pollutant” substance. Marine pollutants that do not meet the criteria for any other hazard class are transported as an environmentally hazardous substance, solid or liquid, N.O.S. (class 9).
(Repetition NTM 1(19)05) (USCG)

(20) POLLUTION-OCEAN DUMPING.

The Marine Protection Research and Sanctuaries Act of 1972, as amended (33 USC 1401 et seq.), regulates the dumping of all material, except fish waste, into ocean waters. Radiological, chemical and biological warfare agents and other high level radioactive wastes are expressly banned from ocean disposal. The Army Corps of Engineers issues permits for the disposal of dredged spoils; the Environmental Protection Agency is authorized to issue permits for all other dumping activities. Surveillance and enforcement to prevent unlawful transportation of material for dumping or unlawful dumping under the Act has been assigned to the U.S. Coast Guard. The Act provides civil penalties of up to $50,000 and criminal penalties of up to $50,000 and/or one year imprisonment.

(20) POLLUTION-OCEAN DUMPING. (Continued).

The Uniform National Discharge Standard (UNDS) is a requirement mandated by Congress that applies to Armed Forces vessels only. Section 325 of the Fiscal Year 1996 National Defense Authorization Act amended Section 312 of the Clean Water Act to provide the DOD and the EPA authority to jointly establish UNDS for incidental liquid discharges from vessels of the Armed Forces. It requires DOD and EPA, in consultation with the USCG, to establish performance standards to mitigate the adverse environmental effects of Armed Forces vessel discharges. It also charges the USCG with enforcing these discharge standards.

The purpose of the UNDS program is to provide a comprehensive system for regulating discharges incidental to the normal operation of an Armed Forces' vessel. UNDS requirements apply to all inland navigable waters and to the ocean waters out to 12 nautical miles. Until the Clean Water Act (CWA) was amended in 1996, there had been no such requirement at the national level.

UNDS regulates discharges incidental to normal operations from: Army, Navy, Air Force, and Marine Corps vessels, Military Sealift Command (MSC) vessels, and Coast Guard vessels.

UNDS does not apply to: Army Corps of Engineers civil works vessels (for example, dredges), Maritime Administration (MARAD) vessels, Memorial and museum vessels, time- and voyage-chartered vessels, vessels under construction, vessels in drydock, or Amphibious vehicles.

(Repetition NTM 1(20)05) (USCG)

(21) WARNING-POSSIBLE DANGER FROM UNLABELED INTERMODAL CONTAINERS AND DRUMS.

With the many exotic chemicals being transported in inter-modal freight containers and in drums as deck cargo, increasingly more reports are received regarding the loss overboard of these potentially dangerous cargo-carrying units. Empty containers and drums may contain residues which may be extremely hazardous to touch or smell, and vapors emanating from these packages may be explosive.

When encountering derelict inter-modal containers and drums, whether afloat or from the sea bottom, the dangers listed above should be considered. Identifying labels will give adequate warning, but containers and drums are more likely to be found with caution labels washed away. All inter-modal freight containers have unique identifying numbers, which should be included in any sighting report if visible from a safe distance. Avoid direct contact and notify U.S. Coast Guard of any sightings in U.S. coastal waters (24 HR TOLL FREE reporting number 1-800-424-8802), or government authorities of the nearest port state if sighting is near any foreign shores.

(Repetition NTM 1(21)05) (USCG)

(22) REPORTING OF DANGERS TO NAVIGATION.

Mariners will occasionally discover uncharted shoals, malfunctions of important navigational aids or other dangerous situations that should be made known to other navigators. Those items that can be classified as urgent should be reported by any rapid means to the closest responsible charting authority. The general criterion for important data is "that information, without which, a mariner might expose his vessel to unnecessary danger." Reports to the U.S. Coast Guard and to foreign authorities can be made via radio using voice, SITOR and Digital Selective Calling (DSC), via TELEX, or via satellite using telephone and fax. Reports to NGA in Bethesda, MD can be made via Defense Messaging System (DMS) (NGA NAVSAFETY) message, TELEX, telephone, fax and e-mail.

Guidance in preparing reports of dangers to navigation and specific radio frequencies, addresses and telephone numbers are contained in NGA Pub. 117, Radio Navigational Aids. Reports should be brief, but must contain:

What - Description of danger
When - GMT and date
Where - Latitude and Longitude (Reference chart in use.)
Who - Reporting vessel and observer

Additionally, mariners are requested to notify NGA of discrepancies in charts and publications, using the Marine Information Report and Suggestion Sheet found in the back of each Notice to Mariners.

(Repetition NTM 1(22)05) (NGA/PVM)

(23) VESSEL RADIOTELEPHONE REGULATIONS.

APPLICATION: These regulations contain watch and equipment requirements for VHF-FM Radiotelephone. The regulations apply to the following vessels (including recreational, uninspected, and military vessels) while underway on the navigable waters of the U.S. (e.g. on internal rivers and tributaries and seaward out to twelve nautical miles off the coast):
(1) Power-driven vessels 20 meters or greater in length;
(2) Vessels 100 gross tons or more carrying one or more passengers for hire (and vessels carrying more than 6 passengers for hire on the Great Lakes);
(3) Towing vessels 26 feet or more in length while towing; and
(4) Dredges and Floating Plants near a channel or fairway.

EQUIPMENT REQUIRED: Vessels subject to the regulation must have two separate VHF-FM radios/receivers. One radio is required to maintain a watch on the designated bridge-to-bridge frequency: Channel 13 (156.65 MHz) or Ch. 67 (156.375 MHz). Another separate radio is required to maintain a watch on Channel 16 (156.8 MHz - Distress, Safety and Calling Channel) or the designated Vessel Traffic Service (VTS) channel; when otherwise not communicating on other channels as required (e.g., port/bridge/lock operations, receiving weather and safety broadcasts, etc.). This requirement can be met with: a single VHF FM radio, provided that it has two separate receivers; two multi-channel VHF-FM radios; or a single channel VHF-FM radio set to bridge-to-bridge frequency, and a separate multi-channel receiver (multi-channel VHF-FM radios should be capable of transmitting and receiving on Channels 13 or 67, 16, 22A (157.1 MHz), and the assigned VTS frequency (i.e., Ch. 5A, 11, 12, and/or 14). Hand-held, portable radios may be used to meet the bridge-to-bridge requirements. However, this radio must be permanently associated with the vessel and it must have a connection for an external antenna. Foreign vessels entering into U.S. waters may use portable equipment, not permanently associated with the vessel, which is brought aboard by a pilot; otherwise, must still meet the provisions above. Note: A single VHF-FM radio capable of scanning, or sequential monitoring (often referred to as “dual watch” capability) will not meet the requirements for both radios.

WATCH ON CHANNEL 13: The master, operator, or whomever is designated to pilot the vessel, must maintain a listening watch on the designated bridge-to-bridge frequency while underway on the navigable waters of the United States. The designated frequency is VHF-FM Channel 13 (except on portions of the lower Mississippi River where Channel 67 is the designated frequency). The person maintaining the watch must also be able to communicate in English.

WATCH ON CHANNEL 16: In addition to the Ch. 13 watch, vessels must keep a continuous watch on VHF-FM Channel 16 (International Distress and Calling Channel) while underway, except when transmitting or receiving traffic on other VHF-FM channels (e.g. vessels may switch to other channels to pass traffic, listen to weather reports, etc.) or when participating in and monitoring a Vessel Traffic Service (VTS) Channel.

VOLUNTARY STATIONS: Vessels not subject to the Vessel Bridge-to-Bridge Regulations although not required to have a VHF-FM radio onboard, must maintain a watch on Channel 16 whenever the radio, if on board, is operating (i.e., energized) and is not being used to communicate on other channels.

MORE INFORMATION: The Vessel Bridge-to-Bridge Radiotelephone Regulations can be found in the Coast Guard publication Navigation Rules: International-Inland, (COMDTINST M16672.2D), additional VHF-FM Radiotelephone regulations can be found in Title 47, Part 80 and Title 33, Part 26 of the Code of Federal Regulations. For questions, write to: Commandant (G-MWV), U.S. Coast Guard, 2100 2nd Street SW, Washington, DC 20593-0001. Tel: (202) 267-0407 or visit: http://www.navcen.uscg.gov/marcomms/.
(Supersedes NTM 1(23)05) (USCG)

(24) SEISMIC SURVEYS.

Details of seismic surveys may be broadcast to mariners via HYDROLANT, HYDROPAC, NAVAREA IV and NAVAREA XII broadcast systems. Surveys can be conducted without prior notification or broadcast warnings.

Survey vessels may operate alone or in company with other surface vessels or submersibles. Survey vessels may be towing cables in excess of 2 miles astern. Cables may be marked by buoys and may be towed on the surface or submerged.

During a survey, repeated shock waves are created by using explosive charges, compressed air, mechanical vibrators or by electrical means at any level from the bottom to the surface. Vessels surveying may be underway but sometimes are stopped for extended periods.

Seismic survey vessels which are unable to maneuver are required to carry the lights and signals described in Rule 27 of International Regulations for Preventing Collisions at Sea. These vessels should be given a wide berth.

Charges may be contained in a variety of cylinders, tubes, or bags which may not be marked as dangerous. No attempt to recover such items should be made. Any suspicious charge-like containers inadvertently taken aboard by trawls or any other means should be carefully handled and jettisoned immediately if possible.
(Repetition NTM 1(24)05) (NGA/PVM)

(25) UNITED STATES-CAUTION REGARDING SUBMARINE OPERATIONS.

Boundary limits and designations of submarine operating areas are shown on the charts in magenta or purple lines. As submarines may be operating in these areas, vessels should proceed with caution. During torpedo practice firing, all vessels are cautioned to keep well clear of naval target vessels flying a large red flag where it may best be seen.

During the past a number of potentially dangerous incidents have occurred. Ships have entered Fleet Operating Areas in which UDT (Underwater Demolition Teams) or SEAL (Sea, Air, and Land) Teams were conducting scheduled operations from a submerged submarine. These operations were being conducted in a specific area assigned for that purpose. These submerged operations ordinarily involve transferring swimmers in and out of a submarine while submerged. In this situation, movements of the submarine must be restricted in course, speed, and depth. Furthermore, emergency surfacing could prove hazardous and result in loss of life to swimmers. Therefore, when conducting operations of this type the submarine and swimmer detachment are relatively immobile and are helpless to evade approaching ships passing through their area. There is also a real danger that a well-intentioned ship, unaware of these operations, might turn in the submarine's direction to investigate rubber raft, swimmers, or submarine periscope.

Notice of date and time prior to any subsurface operations should be provided to Commander Submarine Force, U.S. Atlantic Fleet, 7958 Blandy Rd., Norfolk, VA 23551-2492.

(Repetition NTM 1(25)05) (U.S. NAVY)

(26) SPECIAL RULES WITH RESPECT TO ADDITIONAL STATION AND SIGNAL LIGHTS FOR NAVY SHIPS.

1. Man overboard lights.-Naval vessels may display, as a means of indicating man overboard, two pulsating, all around red lights in a vertical line located on a mast from where they can best be seen.
2. Yard arm signaling lights.-Naval vessels may display, as a means of visual signaling, white all around lights at the end of the yardarms. These lights will flash in varying sequences to convey the intended signal.
3. Aircraft warning lights.-Naval vessels may display, as a means of indicating the presence of an obstruction to low flying aircraft, one or two all around red lights on each obstruction.
4. Underway replenishment contour lights.-Naval vessels may display, as a means of outlining the contour of the delivery ship during night time underway replenishment operations, red or blue lights at deck edge extremities. These lights are being converted to blue, vice red, therefore either color may be seen until conversion is complete.
5. Minesweeping station keeping lights.-Naval vessels engaged in minesweeping operations may display, as an aid in maintaining a prescribed interval and bearing, two white lights in a vertical line visible from 070 through 290 degrees relative.
6. Submarine identification light.-Submarines may display, as a distinctive means of identification, an intermittently flashing amber beacon located where it can best be seen, as near as practicable, all around the horizon.
7. Special operations lights.-Naval vessels may display, as a means of coordinating certain operations, a revolving beam colored red, green or amber, located on either yardarm or mast platform from where it can be seen all around the horizon.
8. Convoy operations stern light.-Naval vessels may display, during periods of convoy operations, a blue light located near the stern, with the same characteristics as, but in lieu of, the normal white stern light.
9. Wake illumination light.-Naval vessels may display a white light located near the stern to illuminate the wake.
10. Flight operations lights.-Naval vessels engaged in night flight operations may display various arrangements of light systems containing combinations of different colored lights as a means of assisting in the launch and recovery of aircraft and enhancing flight safety. These light systems will be located at various points on the vessels, depending on the vessel type and nature or the flight operations being conducted.
11. Amphibious operations lights.-Naval vessels engaged in night amphibious operations may display various arrangements of light systems containing combinations of different colored lights as a means of assisting in the launch and recovery of assault craft and enhancing the safety of the amphibious operation. These light systems will be located at various points on the vessels, depending on the vessel type and the nature of the amphibious operations being conducted.
12. Minesweeping polarity signal lights.-Naval vessels engaged in minesweeping operations may display either a red or green light on each side of vessel.
13. Replenishment-at-sea floodlights.-Naval vessels engaged in replenishment-at-sea operations may display various arrangements of floodlights of different colors for general illumination of equipment, work areas, and cargo being transferred between ships. These lights will be located at various points on the vessels, depending on the vessel type and location of the replenishment-at-sea handling areas.
14. Replenishment-at-sea cargo transfer signal lights.-Naval vessels engaged in replenishment-at-sea operations may display one or more red light signal devices on the delivery side of the vessels. These devices display various combinations of lights to indicate type of cargo being transferred.

(26) SPECIAL RULES WITH RESPECT TO ADDITIONAL STATION AND SIGNAL LIGHTS FOR NAVY SHIPS. (Continued).

15. Replenishment-at-sea truck light.-Naval vessels engaged in replenishment-at-sea operations may display one or more red all-round light(s) located on a mast to assist the receiving vessel in approaching the delivery vessel.
16. Replenishment-at-sea lights.-Naval aircraft carriers and similar type vessels may display two all-round lights installed along the forward starboard flight deck edge to indicate the fore-and-aft axis when the aircraft carrier or similar type vessel is the delivery vessel.

(Repetition NTM 1(26)05) (U.S. NAVY)

(27) UNITED STATES NAVAL VESSELS-NAVIGATIONAL LIGHT WAIVERS-DISTINCTIVE LIGHTS AUTHORIZED FOR NAVAL VESSELS.

1. All ships are warned that, when U.S. Naval vessels are met on the high seas or on navigable waters of the United States during periods when navigational lights may be displayed; certain navigational lights of some naval vessels may vary from the requirements of the Regulations for Preventing Collisions at Sea, 1972, and rules applicable to the navigable waters of the United States, as to number, position, range of visibility or arc of visibility. These differences are necessitated by reasons of military function or special construction of the naval ships. An example is the aircraft carrier where the two masthead lights are considerably displaced to starboard from the center or keel line of the vessel when viewed from ahead. Certain other naval vessels cannot comply with the horizontal separation requirements of the masthead lights, and the two masthead lights on even larger naval vessels, such as some cruisers, will thus appear to be crowded together when viewed from a distance. Other naval vessels may also have unorthodox navigational light arrangements or characteristics when seen either underway or at anchor.
2. Naval vessels may also be expected to display certain other lights. These lights include, but are not limited to, different colored recognition light signals, and aircraft landing lights. These lights may sometimes be shown in combination with navigational lights.
3. During naval maneuvers, naval ships, alone or in company, may also dispense with showing any lights, though efforts will be made to display lights on the approach of shipping.
4. Naval vessels, except for aircraft carrier types (CV and CVN), may dispense with showing the masthead lights during operations or maneuvers in which the vessels are restricted in ability to maneuver.

(Repetition NTM 1(27)05) (CNO)

(28) TRAFFIC SEPARATION SCHEMES, AREAS TO BE AVOIDED, AND RECOMMENDED TRACKS.

To increase the safety of navigation, particularly in converging areas of high traffic density, routes incorporating traffic separation have been adopted by the IMO in certain areas of the world. In the interest of safe navigation, it is recommended that through traffic use these schemes, as far as circumstances permit, by day and by night and in all weather conditions.

An area to be avoided is a routing measure comprising an area within defined limits, in which either navigation is particularly hazardous or it is exceptionally important to avoid casualties, and which should be avoided by all ships, or certain classes of ships.

Recommended tracks are routes, generally found to be free of dangers, which ships are advised to follow to avoid possible hazards nearby.

The International Maritime Organization (IMO) is recognized as the only international body responsible for establishing and recommending measures on an international level concerning ships' routing. In deciding whether or not to adopt or amend a traffic separation scheme, IMO will consider whether the scheme complies with the design criteria for traffic separation schemes and with the established methods of routing. IMO also considers whether the aids to navigation proposed will enable mariners to determine their position with sufficient accuracy to navigate the scheme in accordance with Rule 10 of the International Regulations for Preventing Collisions at Sea (72 COLREGS).

General principles for navigation in traffic separation schemes are as follows:

1. A ship navigating in or near a traffic separation scheme adopted by IMO shall in particular comply with Rule 10 of the 72 COLREGS to minimize the development of risk of collisions with another ship. The other rules of the 72 COLREGS apply in all respects, and particularly the steering and sailing rules if risk of collision with another ship is deemed to exist.
2. Traffic separation schemes are intended for use by day and by night in all weather, ice-free waters or under light ice conditions where no extraordinary maneuvers or assistance by icebreaker(s) is required.
3. Traffic separation schemes are recommended for use by all ships unless stated otherwise. Bearing in mind the need for adequate underkeel clearance, a decision to use a traffic separation scheme must take into account the charted depth, the

(28) TRAFFIC SEPARATION SCHEMES, AREAS TO BE AVOIDED, AND RECOMMENDED TRACKS. (Continued).

possibility of changes in the sea-bed since the time of last survey, and the effects of meteorological and tidal conditions on water depths.

4. A deep water route is an allied routing measure primarily intended for use by ships which require the use of such a route because of their draft in relation to the available depth of water in the area concerned. Through traffic to which the above consideration does not apply should, if practicable, avoid following deep water routes. When using a deep water route mariners should be aware of possible changes in the indicated depth of water due to meteorological or other effects.
5. The arrows printed on charts merely indicate the general direction of traffic; ships should not set their courses strictly along the arrows.
6. Vessels should, so far as practicable, keep clear of a traffic separation line or separation zone.
7. Vessels should avoid anchoring in a traffic separation scheme or in the area near its termination.
8. The signal "YG" meaning "You appear not to be complying with the traffic separation scheme" is provided in the International Code of Signals for appropriate use.
   NOTE.-Several governments administering traffic separation schemes have expressed their concern to IMO about the large number of infringements of Rule 10 of the 72 COLREGS and the dangers of such contraventions to personnel, vessels and environment. Several governments have initiated surveillance of traffic separation schemes for which they are responsible and are providing documented reports of vessel violations to flag states. As in the past, the U.S. Coast Guard will investigate these reports and take appropriate action. Mariners are urged to comply at all times with the 72 COLREGS and, in particular, Rule 10 when operating in or near traffic separation schemes.
9. Notice of temporary adjustments to traffic separation schemes for emergencies or for accommodation of activities which would otherwise contravene Rule 10 or obstruct navigation may be made in Notices to Mariners. Temporary adjustments may be in the form of a precautionary area within a traffic lane, or a shift in the location of a lane.
10. The IMO approved routing measures which affect shipping in or near U.S. waters are:

UNITED STATES TRAFFIC SEPARATION SCHEMES

In the Approaches to Portland, Maine
In the Approaches to Boston, Massachusetts
In the Approaches to Narragansett Bay, Rhode Island and Buzzards Bay, Massachusetts
Off New York
Off Delaware Bay
In the Approaches to Chesapeake Bay
In the Approaches to the Cape Fear River
In the Approaches to Galveston Bay
In the Approaches to Los Angeles-Long Beach
In the Santa Barbara Channel
Off San Francisco
In the Strait of Juan de Fuca and its Approaches
In Puget Sound and its approaches in Haro Strait, Boundary Pass and in the Strait of Georgia
In Prince William Sound, Alaska

UNITED STATES AREAS TO BE AVOIDED

Off Washington Coast
In the region of Nantucket Shoals
At Louisiana Offshore Oil Port (LOOP) in the Gulf of Mexico
In the region of the Northwest Hawaiian Islands
Off the Florida Coast (Adjacent to Florida Keys)
Off the California Coast (In the region of the Channel Islands)

(Supersedes NTM 1(28)05) (IMO/USCG/NGA)

(29) FIRING DANGER AREAS.

Firing and bombing practice exercises take place either occasionally or regularly in numerous areas established for those purposes along the coast of practically all maritime countries.

In view of the difficulty in keeping these areas up to date on the charts, and since the responsibility to avoid accidents rests with the authorities using the areas for firing and/or bombing practice, these areas will not as a rule be shown on NGA charts.

(29) FIRING DANGER AREAS. (Continued).

National Ocean Service Charts show firing and bombing practice areas as defined by Code of Federal Regulations (Title 33, Part 334) in United States waters.

Any permanent aid to navigation that may be established to mark a danger area, or any target, fixed or floating, that may constitute a danger to navigation, will be shown on the appropriate charts.

Warning signals, usually consisting of red flags or red lights, are customarily displayed before and during the practice, but the absence of such warnings cannot be accepted as evidence that a practice area does not exist. Vessels should be on the lookout for local warnings and signals, and should, whenever possible, avoid passing through an area in which practice is in progress, but if compelled to do so should endeavor to clear it at the earliest possible moment.

(Repetition NTM 1(29)05) (NGA/PVM)

(30) LORAN INFORMATION.

Loran-C is a long-range hyperbolic radionavigation system using at least three land based radio transmitters (90 to 110 kHz frequency band) and receivers to allow mariners, aviators, and land based navigators to determine their position. Twenty-four Loran-C stations provide position information accurate to less than 0.25 nautical miles for the continental U.S. and most of Alaska. The U.S. Coast Guard operates Loran-C chains in cooperation with Canada and Russia. The accuracy of Loran-C will vary depending on capability of user equipment and location to transmitting stations. Loran-C nautical chart coverage can be found in the NGA/DLIS Catalog of Maps Charts and Related Products. Tabular information for Loran-C Rate Publications is no longer available.

(Supersedes NTM 1(30)05) (USCG/NGA)

(31) ENDANGERED SPECIES (WHALES AND SEA TURTLES) EASTERN SEABOARD.

NOAA's National Marine Fisheries Service, Office of Protected Resources has advised that several species of endangered whales and endangered and threatened sea turtles inhabit areas along the Eastern Seaboard. Among these is the northern right whale, the world's most endangered large whale species, and collisions with ships are a significant source of mortality in this species. Collisions with whales can also result in significant damage to vessels, most commonly involving bent shafts or damaged propellers. Sea turtles are also susceptible to vessel collision because they surface to breathe and may rest at or near the surface. Nearshore habitat as well as natural and maintained channels may provide food, shelter and migration corridors to sea turtles. Sea turtles also associate with offshore oceanographic fronts and the warm water of the Gulf Stream.

Right whales are vulnerable to vessel collisions. As discussed below, right whales are seasonally abundant in waters off Florida, Georgia, New England and Canada. Right whale advisories and sighting locations are available for these areas via Coast Guard Broadcast Notice to Mariners, NAVTEX and other media.

There are about 300 northern right whales in the North Atlantic, and the species is listed as endangered under the Endangered Species Act. Right whales are highly vulnerable to vessel collisions because they can be difficult to spot, often do not move out of the way of approaching ships, and mate, rest, feed, and nurse their young at the surface.

Right whales occur along the east coast from calving areas off southern Georgia and northern Florida to feeding and mating areas off Massachusetts, in the Gulf of Maine and Bay of Fundy. In the Northeast United States, right whales occur seasonally in Cape Cod Bay (peak season: January through April), the Great South Channel (peak season: April through June), Stellwagen Bank (peak season: January through April), Jeffreys Ledge (peak season: July through mid-December), and the Bay of Fundy (Grand Manan Basin) (peak season: June through December). The first two areas are Federally-designated right whale critical habitats. Stellwagen Bank and Jeffreys Ledge are located in the Federally-designated Gerry E. Studds Stellwagen Bank National Marine Sanctuary. The Grand Manan Basin is a Canadian whale conservation area. Other whale species are present in spring and summer. Juvenile humpback and fin whales frequent near shore waters of the mid-Atlantic year round and are particularly abundant off Virginia and North Carolina in winter. Other whale species are present primarily in spring and summer. Sea turtles occur in coastal waters of Maine through Virginia in summer and fall (May through November).

In the Southeast United States, coastal waters off Georgia and northeastern Florida is the only known calving area for right whales. This area is a Federally-designated right whale critical habitat. The calving season is generally December through March. In March and April, right whales accompanied by calves migrate northward, often within 20 miles of the coast. Juvenile humpback and fin whales frequent near shore waters of the mid-Atlantic year round and are particularly abundant off

(31) ENDANGERED SPECIES (WHALES AND SEA TURTLES) EASTERN SEABOARD. (Continued).

Virginia and North Carolina during winter. Sea turtles occur year round from North Carolina through Florida; however, they are especially abundant during the spring and summer, just prior to and during the mating season.

Vessel operators should be particularly alert to avoid hitting or disturbing right whales. In seasons and in areas that right whales may occur, vessel operators should maintain a sharp lookout. Field identification cues include a broad back with no dorsal fin, irregular bumpy white patches (callosities) on the head, and a distinctive two-column V-shaped blow. They have paddle-like flippers nearly as wide as they are long, and a broad, deeply notched tail. Right whales reach lengths of 45 to 55 feet and are black in color.

Two of the best documented ship strikes involved whales being struck and killed by vessels steaming at 15 knots. One vessel was steaming in clear weather and calm seas, just before dusk, and well off the Mid-Atlantic coast, when a small group of whales surfaced about 50 yards off the starboard bow. A juvenile in the group was struck by the ship's propellers and killed. The second vessel was steaming in thick fog, inshore off the southeast coast in early January, when it struck a juvenile, apparently dead-on.

Seasonal right whale advisories and sighting reports are broadcast periodically for these areas by Coast Guard Broadcast Notice to Mariners, NAVTEX, NOAA Weather Radio, Cape Cod Canal Vessel Traffic Control, the Bay of Fundy Vessel Traffic Control, and other means. As weather and conditions permit, a dedicated seasonal program of over flights and vessel surveys are done in Cape Cod Bay and the Great South Channel and from the Savannah River, Georgia south to Sebastian Inlet, Florida. However, many right whales go undetected. Consult *Coast Pilots* for the U.S. East Coast and nautical charts for information on the boundaries of right whale critical habitat and precautionary measures that mariners can take to reduce the likelihood of ship strikes.

To address the problem of ship strikes, NOAA and the U.S. Coast Guard have established a Mandatory Ship Reporting System in the above-mentioned right whale critical habitats. As of July 1, 1999, the system requires all commercial ships 300 gross tons or greater to report to a shore-based station when entering the two habitat areas and provide their name, call sign, course, speed, location, destination and route (see following table). In return, ships will receive an automated message indicating that the ship is entering an area critical for right whales, that whales are likely to be in the area and that ship strikes are a serious threat to whales and may cause damage to the ship. Advice on precautionary measures mariners can take to reduce the possibility of hitting right whales and recent sighting locations are also included. The reporting system requires reporting only and will affect no other aspect of vessel operation. For information about how and when to report, consult Coast Guard Local Notice to Mariners (No. 27/99) and an interim final rule (64 FR 29229) and a final rule (66 FR 5806, 20 November 2001) which provides the regulations. Please note that a change has been made in the reporting procedures since publication of the interim final rule. Vessels must now include an additional paragraph (M), before paragraph (A), which provides the vessel's Inmarsat number. Additional information on the revised reporting procedures may be obtained at the following website: http://www.nmfs.noaa.gov/pr/shipstrike/msr/.

This table identifies requirements for reporting to the mandatory ship reporting system. The change noted above in the requirements is indicated in the first line.

Paragraph	Function	Information Required
System name	System Identifier	Ship reporting system (WHALESNORTH or WHALESSOUTH).
M	Inmarsat number	Vessel Inmarsat number.
A	Ship	Vessel name and call sign.
B	Date, time, and month of report	Six digit group giving day of month and time, single letter indicating time zone, and three letters indicating month.
E	True course	3-digit number indicating true course.
F	Speed in knots and tenths	3-digit group indicating knots and tenths

(31) ENDANGERED SPECIES (WHALES AND SEA TURTLES) EASTERN SEABOARD. (Continued).

Paragraph	Function	Information Required
H	Date, time, and point of entry into system	Date and time expressed as in (B) and latitude and longitude expressed as a four digit group giving latitude, the letter N indicating north, followed by a /, a five digit group giving longitude, and the letter W indicating west.
I	Destination and ETA	Name of port and arrival time expressed as in (B).
L	Route information	Route information should be reported as direct rhumbline to port (RL) and intended speed or a series of way points (WP). Vessels reporting waypoints should include latitude and longitude, expressed as in (H), and intended speed between waypoints. For vessels transiting within a traffic separation scheme (TSS), give only the WP on entry and departure of TSS.

The National Marine Fisheries Service recommends the following precautionary measures be taken to reduce the risk of colliding with northern right whales when transiting right whale critical habitat:

1. Consult with local pilots' associations for precautionary measures when transiting right whale critical habitat 1. As soon as possible prior to entering right whale critical habitat areas.
2. As soon as possible prior to entering right whale critical habitat, check Coast Guard Broadcast Notice to Mariners, NAVTEX, the Coast Pilot, local pilots, and other sources for recent right whale sighting reports. In the northern critical habitat area, mariners should also check NOAA Weather Radio, Cape Cod Canal Vessel Traffic Control, and the Bay of Fundy Vessel Traffic Control.
3. To the extent possible, review right whale identification materials and maintain a sharp watch with lookouts familiar with spotting whales.
4. When planning passage through a right whale critical habitat, attempt to avoid night-time transits and, when practical, minimize the distance traveled through the area. Anticipate delays due to whale sightings. When planning passage along the southeast coast during calving season (between 15 November and 15 April), attempt to avoid transit through critical habitat area by remaining offshore, and minimize travel distances through the critical habitat when entering or leaving port. When the ability to spot whales is limited (e.g., night, fog, rain), reduced speed may minimize the risk of colliding with a right whale.
5. Traveling at speeds in excess of 14 knots may increase the likelihood of striking a whale. It is recommended that where possible, and when trip planning allows, ships travel less than 14 knots.
6. If a right whale is reported within 20 nautical miles of a ship's position, post a lookout familiar with spotting whales, exercise caution, and proceed at a safe speed, bearing in mind that reduced speed may minimize the risk of a ship strike.
7. Do not assume right whales will move out of your way. Right whales are generally slow moving and seldom travel faster than 5-6 knots. Consistent with safe navigation, maneuver around observed right whales or recently reported sighting locations. Federal regulation prohibits the approach within 500 yards of any right whale anywhere in the U.S. Atlantic EEZ. The same regulations have been implemented in the State of Massachusetts.
8. Any whale accidentally struck, any dead whale, or any whale observed entangled in fishing gear should be reported immediately to the Coast Guard on VHF channel 16 noting the precise location, date, and time of the accident or sighting. In the event of a strike or sighting, amplifying information such as the speed of the vessel, size of the vessel, water depth, wind speed and direction, description of the impact, fate of the whale, species, and size should be reported if known.
9. Right whales can occur anywhere along the east coast. Therefore, mariners are urged to exercise prudent seamanship with regard to right whales at all times when transiting the U.S. East Coast.

(Supersedes NTM 1(31)05) (NOAA)

(32) REPORTING DEPTH INFORMATION.

The many ships presently equipped with reliable depth recorders constitute a potential wealth of sounding data desired by charting agencies for the purpose of confirming charted depths or charting heretofore unknown depths. While oceanographic survey vessels remain the primary source of bathymetric data, depth recordings submitted by navy, coast guard and merchant vessels will make an important contribution to the vital task of charting the oceans.

(32) REPORTING DEPTH INFORMATION. (Continued).

Mariners are encouraged to obtain and report soundings whenever bridge routine and equipment capabilities will allow. The American Practical Navigator (Bowditch) (NVPUB9), Sections 2911-2916 describes the bathymetric requirements and provides some guidance for observing and reporting sonic soundings. However, soundings must be correlated to positions and accompanied by supportive data such as:

(a) Detailed position/time information.
(b) Mariner's own evaluation of positional accuracy (type of navigational system used and frequency of fixes).
(c) Ship's course and speed with time of changes noted.
(d) Echogram scales in use and graduated scales provided, with time of scale changes.
(e) Draft of vessel and whether zero reference is corrected for draft.
(f) Regular annotations of date/time marks on echograms to enable correlation with positions.
(g) State of the tide and weather conditions.
(h) Other related information considered appropriate.

An uncharted depth of 15 fathoms/28 meters or less should be considered an urgent danger to navigation, and should be reported via radio without delay. Follow up with substantiating evidence, including the echogram, track chart and/or position log and all relevant navigational data and forward to NGA at the earliest opportunity.

Charts submitted to amplify a sounding report will be replaced, on request, with a new chart, except that foreign charts will be replaced with the equivalent U.S. chart, if available. Data reports and charts should be sent to the National Geospatial-Intelligence Agency, Attn: PVM, MS D-44, 4600 Sangamore Road, Bethesda, MD 20816-5003, either directly by mail or via any U.S. Consulate.

(Repetition NTM 1(32)05) (NGA/PVM)

(33) WARNING-MINED AREAS.

Mines of various types and ages pose a threat to navigation in many parts of the world. Once mined, an area can never be certified to be completely danger free. Sweeping produces only statistical probability of protection. Mines may still remain, having failed to respond to orthodox sweeping methods. Some swept areas have not been covered by modern surveys and may contain uncharted wrecks, shoals or other dangers to navigation.

Prudent seamanship in former mine fields, swept channels and swept areas includes:

(a) Transit using only established routes or buoyed channels.
(b) Avoid shallow water. Sweeping techniques often preclude sweeping in restricted waters.
(c) Avoid fishing, trawling or any other form of submarine or seabed activity.
(d) Mariners are advised to anchor with caution only in established anchorages.
(e) Consult local authorities and regulations.

(Repetition NTM 1(33)05) (U.S. NAVY)

(34) MINED AREAS REPORTED.

Minefields-Tarabulus, Libya.

In early 1973 Libya reported that the following areas had been mined. Although these areas are probably no longer a mine threat, they still represent a potential hazard to navigation. The areas reported by Libya are bounded by lines joining the following positions:

1. (a) 32°52'48"N., 13°24'30"E.
   (b) 32°57'42"N., 13°24'30"E.
   (c) 32°57'42"N., 13°18'00"E.
   (d) 32°53'48"N., 13°22'18"E.

2. (a) 32°53'42"N., 13°20'36"E.
   (b) 32°55'54"N., 13°18'00"E.
   (c) 32°55'54"N., 13°15'00"E.
   (d) 32°54'30"N., 13°15'00"E.

(Repetition NTM 1(34)05) (U.S. NAVY)

(35) MINESWEEPING-CAUTION-ATTENTION IS CALLED TO THE FOLLOWING INSTRUCTIONS.

Minesweeping Operations:

(a) United States vessels engaged in minesweeping operations or exercises are hampered to a considerable extent in their maneuvering powers. Other Vessels Must Keep Clear of Minesweepers (COLREGS 1972).

(35) MINESWEEPING-CAUTION-ATTENTION IS CALLED TO THE FOLLOWING INSTRUCTIONS. (Continued).

(b) With a view to indicating the nature of the work on which they are engaged, these vessels will show the signals hereinafter mentioned. For the public safety, all other vessels, whether steamers or sailing craft, must endeavor to keep out of the way of vessels displaying these signals and not approach them inside the distances mentioned herein, especially remembering that it is dangerous to pass between the vessels of a pair or group sweeping together.

(c) All vessels towing sweeps are to show:
BY DAY.-A black ball at the fore mast and a black ball at the end of each fore yard.
BY NIGHT.-All around green lights instead of the black balls, and in a similar manner.

(d) Vessels or formations showing these signals are not to be approached nearer than 1,000 meters on either beam and vessels are not to cross astern closer than 1,000 meters. Under no circumstances is a vessel to pass through a formation of minesweepers.

(e) Minesweepers should be prepared to warn merchant vessels which persist in approaching too close by means of any of the appropriate signals from the International Code of Signals.

(f) In fog, mist, falling snow, heavy rainstorms, or any other conditions similarly restricting visibility, whether by day or night, minesweepers while towing sweeps when in the vicinity of other vessels will sound signals for a vessel towing (1 prolonged blast followed by 2 short blasts).

Helicopters Conducting Minesweeping Operations:

(a) The United States is increasingly employing helicopters to conduct minesweeping operations or exercises. When so engaged, helicopters, like vessels, are considerably hampered in their ability to maneuver. Accordingly, surface craft approaching helicopters engaged in minesweeping operations should take safety precautions similar to those described in (b) and (d) above with respect to minesweeping vessels.

(b) Helicopters towing minesweeping gear and accompanying surface escorts, if any, will use all available means to warn approaching ships of the operations or exercises being conducted. Also, measures will be taken where practicable to mark or light the gear or objects being towed.

(c) Minesweeping helicopters are equipped with a rotating beacon which has selectable red and amber modes. The amber mode is used during towing operations to notify/warn other vessels that the helicopter is towing. While towing, the helicopter's altitude varies from 15 to 95 meters above the water and speeds vary from 0 to 30 knots.

(d) General descriptions and approximate dimensions for towed minesweeping gear currently being used in conjunction with helicopters are as follows:

(1) Mechanical sweep gear consisting, in part, of large lengths of submerged cables and explosive cutters. The only items normally visible on the surface are three to five international orange floats, depending upon the quantity of gear in use, which generally define the dimensions of the tow. The maximum width is 100 meters and the maximum distance behind the helicopter is 600 meters.

(2) Acoustical sweep device weighing approximately 70 pounds. This device is towed behind the helicopter on a 250-meter orange polypropylene tow cable. When dead in the water, the gear will rise to the surface, supported by a yellow float.

(3) A hydrofoil platform containing equipment used for magnetic influence sweeping. The platform is towed on the end of a 140-meter cable and trails electrodes in the water which extend 185 meters behind the platform. Very often, the aforementioned acoustical sweep device is towed in conjunction with this platform by attaching it to the end of one of the electrodes by a 30-meter polypropylene tow line. In this configuration, the total length of the tow is 215 and 350 meters, respectively, behind the hydrofoil platform and helicopter. Special care must be exercised when crossing astern of the hydrofoil platform as the towed cable is barely visible, and the attached acoustic device is submerged just beneath the surface and is not visible to surface vessels.

(4) Helicopters employed in minesweeping operations and their tows may function during the day, and in various types of weather conditions. The major danger to any surface vessel is getting the various cables wrapped in its screws. Small craft also are subject to the risk of collision with the hydrofoil platform.

(Repetition NTM 1(35)05) (U.S. NAVY)

(36) UNITED STATES-EXPLOSIVE ORDNANCE-WARNING-GENERAL.

The continental shelf of the United States contains many forms of unexploded ordnance (military weapons), and while some ordnance hazard areas are designated, many unexploded ordnance locations are not known. The types most likely to be encountered are underwater ordnance (weapons) such as torpedoes, mines, depth charges, and aerial bombs, but other

(36) UNITED STATES-EXPLOSIVE ORDNANCE-WARNING-GENERAL. (Continued).

ordnance items may be found. In general, any metallic object having fins, vanes, propellers, horns, or possibly plates screwed or bolted to an external surface should be regarded as dangerous. This warning is published for all shipmasters, trawlers, fishermen, divers or persons conducting operations on or near the ocean bottom, and provides instructions on the action to be taken when ordnance items or suspicious objects are encountered:

(1) OBJECTS SNAGGED OR NETTED: Any object which cannot be immediately identified as a non-explosive (inert) item MUST BE TREATED AS AN EXPLOSIVE ITEM. If in any doubt about its identity, TREAT IT AS EXPLOSIVE. Non-explosive naval ordnance items such as practice torpedoes and practice mines will normally be painted bright orange, for ready identification. Any object which is not painted orange may be dangerous and possibly can explode if brought on board or bumped in any way. If an object is brought to the surface of the water and it cannot be immediately identified as an inert item, DO NOT ATTEMPT TO BRING IT ON BOARD OR ALONGSIDE. If possible, release the object immediately and radio the nearest Navy or Coast Guard activity giving position and description of the object. If the object cannot be released, or freed by cutting net or line, the following actions are advised:
   (a) stream object as far aft as possible;
   (b) notify nearest Navy or Coast Guard activity and stand by for instructions or help;
   (c) position crew at forward end of vessel, keeping deckhouse between them and the object astern; exposed personnel should remain under cover if possible;
   (d) maintain steerageway as necessary to stay in the area until help or instructions arrive.

   If unable to stand by while waiting for instructions because of deteriorating weather or sea conditions or other uncontrollable factors, keep the Navy or Coast Guard activity informed of your vessel's position AND AVOID POPULATED AREAS, OTHER VESSELS, OR SHORE- OR SEA-BASED STRUCTURES.

(2) OBJECTS BROUGHT ON BOARD: If a suspected explosive object is not detected until trawl or net contents have been discharged on board the vessel, take the following actions:
   (a) avoid any bump or shock to the object;
   (b) secure it in place against movement;
   (c) keep it covered up and wet down;
   (d) radio nearest Navy or Coast Guard activity and standby for instructions.

   If unable to stand by while waiting for instructions because of deteriorating weather or sea conditions or other uncontrollable factors, keep the Navy or Coast Guard activity informed of your vessel's position AND AVOID POPULATED AREAS, OTHER VESSELS, OR SHORE-OR SEA-BASED STRUCTURES.

(3) FLOATING OBJECTS: If a floating object cannot be readily identified as non-explosive, IT MUST BE CONSIDERED TO BE EXPLOSIVE. DO NOT APPROACH, OR ATTEMPT TO RECOVER OR BRING ON BOARD. Report location immediately to the nearest Navy or Coast Guard activity and warn all other ships or craft in the vicinity. Try to keep the object in sight until instructions are received.

(4) NAVAL MINES: Naval mines constitute a risk to shipping, fishing, underwater exploration, and other maritime interests. The different types of mines, the conditions under which they are most likely to be sighted, and the recommended action are as follows:

   FLOATING MINES- Consider all floating mines to be live and dangerous. DO NOT TOUCH OR APPROACH. The possibility of drifting mines being camouflaged with seaweed or other innocent appearing floating objects should be borne in mind and avoiding action taken. The following procedures and precautions are recommended:

   GROUND MINES- ON THE HIGH SEAS. Report the location of the mine by the most rapid means as soon as circumstances permit, this report is to be similar to that required for any hazard to navigation (See para 5). Mines sighted in anchorage areas or other patrolled water should, if circumstances permit, be kept under observation and reported to the nearest Navy or Coast Guard activity (See para 5). The recovery or handling of the mine should be done only by qualified explosive ordnance disposal personnel. If a mine is drifting down on a vessel at anchor and it cannot be avoided by other means, it is recommended that a stream of water from a fire hose be played near the mine to force it away from the vessel. WARNING: Mines may explode if a stream of water is played near them. Exposed personnel should remain under cover until danger is past.

   MOORED MINES- Moored mines may sometimes be seen several feet under the surface if the water is clear, or the mine may be floating on the surface. Often several mines or even a long row of the mines can be seen. Usually the sighting of one or more such mines indicates the presence of a minefield. Approaching the general vicinity of such mines is dangerous and should not ordinarily be undertaken by vessels. When mines are sighted, the location of the

(36) UNITED STATES-EXPLOSIVE ORDNANCE-WARNING-GENERAL. (Continued).

mines should be determined as accurately as possible, the area should be buoyed if this is feasible, all ships in the vicinity should be warned, and the appropriate Navy or Coast Guard activity should be notified immediately. Ground mines are normally laid in water so deep that they will not be seen unless the water is very clear. However, in very clear water with a hard white sand bottom, even a camouflaged mine can often be located because of the long, regular shadow it casts. The sighting of such a mine may indicate a minefield in the neighborhood. Approaching the general vicinity of such a mine is very dangerous. If a mine is sighted, the location should be determined as accurately as possible and buoyed, all ships in the vicinity should be warned, and the appropriate Navy or Coast Guard activity should be notified immediately.

BEACHED MINES- Any of the above types of mine may be found on the beach, either thrown up by the waves or mislaid by aircraft. Any mine found beached or floating close inshore should be reported at once to the nearest Navy, Coast Guard, military, or civil authority, and the mine should be kept under guard until the arrival of responsible authorities. No person except qualified explosive ordnance disposal personnel should be allowed closer than 400 yards.

(5) REPORTING OF SUSPICIOUS OBJECTS RESEMBLING MINES: Ships frequently report objects resembling mines but give insufficient information to properly evaluate the reports. As a result, needless time and expense is incurred only to find that they are not mines but other floating objects. HOWEVER, VESSELS SHOULD NOT ATTEMPT TO RECOVER OBJECTS RESEMBLING MINES OR PASS CLOSE ABOARD FOR POSITIVE IDENTIFICATION-KEEP WELL CLEAR. Since mines are a danger to life and property at sea, masters of ships sighting unidentified or suspicious objects are requested to furnish the following information to the nearest Navy or Coast Guard radio station or activity:

(a) Position of object, and how closely it was approached.
(b) Size, shape, condition of painting, and the presence of marine growth.
(c) Whether or not horns or rings are attached.
(d) Whether or not definite identification possible.

(Repetition NTM 1(36)05) (U.S. NAVY)

(37) CAUTION-OIL WELL STRUCTURES IN WATERS CONTIGUOUS TO THE U.S. AND ITS TERRITORIES.

Caution should be exercised when navigating in the waters contiguous to the U.S. and its territories particularly in the Gulf of Mexico, Santa Barbara Channel, California, and Cook Inlet, Alaska, in order to avoid collision with oil well structures and their associated mooring piles, anchor and mooring buoys, etc.

In general, oil well structures can be identified at night by the display of one or more quick flashing white or red lights, however, ships can expect to encounter unlighted structures as well. Structures may be equipped with a fog signal consisting of a horn sounding one 2-second blast every 20 seconds. Submerged wells may be marked by lighted or unlighted buoys.

Shipping safety fairways have been established through the concentration of oil wells in the Gulf of Mexico and Santa Barbara Channel. Mariners are encouraged to use these fairways and should avoid anchoring within a safety fairway. Certain areas adjacent to shipping safety fairways have been charted as fairway anchorages.

(Repetition NTM 1(37)05) (USCG)

(38) CAUTION REGARDING APPROACH OF SINGLE VESSELS TOWARD NAVAL FORMATIONS AND CONVOYS.

A formation of warships or a convoy is more difficult to maneuver than a single ship. Therefore, the attention of masters is called to the danger of all concerned which is caused by a single vessel approaching a formation of warships or convoy so closely as to involve risk of collision, or attempting to pass ahead of, or through such a formation or convoy. All ships are therefore cautioned to employ the customary manners of good seamanship and, where there is ample sea room, adopt early measures to keep out of the way of a formation of warships or convoy. The fact that in the interests of safety a single vessel should keep out of the way of a formation or convoy does not entitle vessels sailing in company to proceed without regard to the movements of the single vessel. Vessels sailing in formation or convoy should accordingly keep a careful watch on the movements of any single vessel approaching the squadron or convoy and should be ready, in the case the single vessel does not keep out of the way, to take such action as will best aid to avert collision.

(Repetition NTM 1(38)05) (U.S. NAVY)

(39) NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY DISTRIBUTION SYSTEM.

GENERAL INFORMATION AND CUSTOMER ORDERING GUIDANCE.

DEFENSE SUPPLY CENTER RICHMOND-MAPPING CUSTOMER OPERATIONS (DSCR-FAN).

The DSCR Mapping Customer Operations (DSCR-FANB) is available to assist customers during normal duty hours, Monday through Friday, 0630 to 1700 EST. After hours messages are recorded for processing on the next business day. The office can respond to inquires regarding catalog usage, ordering procedures, product availability, disposition of excess stock, subscriptions and many other GGI&S related activities and interests.

Mailing Address:

Defense Supply Center Richmond
ATTN: DSCR-FAN
8000 Jefferson Davis Highway
Richmond, VA 23297-5335

Message Address:

DSCR RICHMOND VA//DSCR-FAN//
DSN: 695-6500; Fax: 695-6510
Tel: (804) 279-6500; Fax: (804) 279-6510
Toll Free: 1-800-826-0342
E-mail: pc9@dla.mil
Website: www.dscr.dla.mil/rmf/

After Normal Duty Hours and Crisis Support

Pager-DSCR-FANB Duty Officer: Tel. (804) 279-6500
DSN 695-6500
Toll Free 1-800-826-0342

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY (NGA) CUSTOMER HELP DESK.

The NGA Customer Help Desk is available to assist customers with general questions about NGA products and services. U.S. customers may call from 0600 to 1800 CST, Monday through Friday, toll free at 1-800-455-0899. U.S. and OCONUS customers may call DSN: 693-4864; DSN: Fax: 693-4875, Tel: Fax: (314) 263-4875; (E-mail: chdesk@nga.mil).

OBTAINING NGA NAUTICAL CHARTS AND PUBLICATIONS.

DoD customers should refer to the ordering procedures contained in the applicable volume or bulletin of the NGA Catalog. Requests for NGA products from non-DoD U.S. Government Agencies are on a reimbursable basis.

(1) CHARTS

As of 1 October 1992, the public sale of NGA aeronautical and nautical charts and related publications was transferred to the U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office (NACO). Public sale customers may purchase NGA aeronautical and nautical charts from:

FAA, National Aeronautical Charting Office
Distribution Division, AVN-530
6303 Ivy Lane, Suite 400
Greenbelt, MD 20770
Telephone: 1-800-638-8972 (Within the U.S. only)
Telephone: (301) 436-8301
Fax: (301) 436-6829
E-Mail: 9-AMC-Chartsales@faa.gov
Website: http://naco.faa.gov

(2) PUBLICATIONS

As of 1 October 2000, the public sale of all new editions of NGA nautical publications was transferred to the U.S. Government Printing Office (GPO) for both wholesale and retail purposes. All subsequent wholesale agreements for NGA nautical publications must be established with the GPO Superintendent of Documents (GPO SuDocs). Publications may

(39) NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY DISTRIBUTION SYSTEM. (Continued).

be ordered any time through the U.S. Government Online Bookstore at http://bookstore.gpo.gov or by fax at (202) 512-2104, or by telephone Monday through Friday from 7:30 a.m. to 9:00 p.m. EST at (202) 512-1800 or toll free at 1-866-512-1800. Mail orders including payment are sent to:

U.S. Government Printing Office
Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954

(Supersedes NTM 1(39)05) (NGA/NOAA)

(40) INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO).

The International Hydrographic Organization (IHO) was originally established in 1921 as the International Hydrographic Bureau (IHB), the present name having been adopted in 1970 as a result of a revised international agreement between the member nations. However, the former name, International Hydrographic Bureau, was retained for the IHO's administrative body of three Directors and a small Staff at the Organization's headquarters in Monaco.

The IHO sets forth hydrographic standards as they are agreed upon by the member nations. All Member States are urged and encouraged to follow these standards in their surveys, nautical charts and publications. As these standards are uniformly adopted, the products of the world's hydrographic and oceanographic offices become more uniform. Much has been done in the field of standardization since the Bureau was founded.

The principal work undertaken by the IHO is:

(a) To bring about a close and permanent association between national hydrographic offices;
(b) To study matters relating to hydrography and allied sciences and techniques;
(c) To further the exchange of nautical charts and documents between hydrographic offices of Member Governments;
(d) To circulate the appropriate documents;
(e) To tender guidance and advice upon request, in particular to countries needing technical assistance while engaged in setting up or expanding their hydrographic service;
(f) To encourage coordination of hydrographic surveys with relevant oceanographic activities;
(g) To extend and facilitate the application of oceanographic knowledge for the benefit of navigators;
(h) To cooperate with international organizations and scientific institutions which have related objectives.

During the 19th century, many maritime nations established hydrographic offices to provide means for improving the navigation of naval and merchant marine vessels by providing nautical publications, nautical charts and other navigational services. Non-uniformity of hydrographic procedures, charts and publications was much in evidence. In 1889, an International Marine Conference was held at Washington, D.C., and it was proposed to establish a "permanent international commission." Similar proposals were made at the sessions of the International Congress of Navigation held at St. Petersburg in 1908 and again in 1912.

In 1919 the hydrographers of Great Britain and France cooperated in taking the necessary steps to convene an international conference of hydrographers. London was selected as the most suitable place for this conference and on July 24, 1919, the First International Conference opened, attended by the hydrographers of 24 nations. The object of the conference was clearly stated in the invitation to attend. It read, "To consider the advisability of all maritime nations adopting similar methods in the preparation, construction, and production of their charts and all hydrographic publications; of rendering the results in the most convenient form to enable them to be readily used; of instituting a prompt system of mutual exchange of hydrographic information between all countries; and of providing an opportunity for consultations and discussions to be carried out on hydrographic subjects generally by the hydrographic experts of the world." In general, this is still the purpose of the International Hydrographic Organization. As a result of the conference, a permanent organization was formed and statutes for its operations were prepared. The International Hydrographic Bureau, now the International Hydrographic Organization, began its activities in 1921 with 18 nations as members. The Principality of Monaco was selected as the headquarters because of its easy communication with the rest of the world and also because of the generous offer of Prince Albert I of Monaco to provide suitable accommodations for the Bureau in the Principality. The IHO, including the 3 Directors and their staff, is housed in its own headquarters which were built and are maintained by the Government of Monaco.

Officers and enlisted men of naval vessels and masters, mates or navigating personnel of merchant ships, including pleasure craft, are welcome to visit the Bureau's Office at 4 quai Antoine 1er, Monte-Carlo.

(40) INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO). (Continued).

The works of the IHO are published in both French and English and distributed through various media. Many of the publications are available to the general public, and a discount of 30 percent is offered to naval or merchant marine officers of any of the member nations. Inquiries as to the availability of the publications should be made directly to the "International Hydrographic Bureau, 4 quai Antoine 1er, B.P. 445, MC 98011 MONACO CEDEX, Principality of Monaco."

In order that the work of the IHO may be reviewed and future plans developed, conferences are held every five years. They are attended by delegates from member nations.

Presently, the following nations are Member States of the International Hydrographic Organization:

Algeria	Guatemala	Portugal
Argentina	Iceland	*Qatar
Australia	India	*Romania
Bahrain	Indonesia	Russia
Bangladesh	Iran	*Saudi Arabia
Belgium	Italy	Serbia and Montenegro
Brazil	Jamaica	Singapore
*Bulgaria	Japan	Slovenia
Burma	Kuwait	South Africa
Canada	Latvia	South Korea
*Cameroon	Malaysia	Spain
Chile	*Mauritania	Sri Lanka
China	*Mauritius	Suriname
Colombia	Mexico	Sweden
Congo, Democratic Republic of the	Monaco	Syria
Croatia	Morocco	Thailand
Cuba	Mozambique	Tonga
Cyprus	Netherlands	Trinidad and Tobago
Denmark	New Zealand	Tunisia
Dominican Republic	Nigeria	Turkey
Ecuador	North Korea	Ukraine
Egypt	Norway	United Arab Emirates
Estonia	Oman	United Kingdom
Fiji	Pakistan	United States
Finland	Papua New Guinea	Uruguay
France	Peru	Venezuela
Germany	Philippines	
Greece	Poland	

* Membership of IHO pending

(Supersedes NTM 1(40)05) (IHO)

(41) INTERNATIONAL DISTRESS SIGNALS.

1. All seamen should be familiar with the international distress signals and procedures, both for recognition purposes and for self-reliance in the event of distress where captain and officers may have been incapacitated.

2. Short range distress signals, limited to range of visibility or audibility are:
   (a) "SOS" signal made by any audio or visual means.
   (b) International Code of Signals "NC".
   (c) Hoisting any square flag with a ball or anything resembling a ball, above or below it.
   (d) Flames made visible (as a burning oil barrel).

(41) INTERNATIONAL DISTRESS SIGNALS. (Continued).

(e) A rocket parachute flare or hand held flare showing a red light.
(f) Rockets or shells, throwing red stars fired one at a time at short intervals.
(g) Orange smoke, as emitted from a distress flare.
(h) A gun or other explosive signal fired at intervals of about one minute.
(i) A continuous sounding of any fog-signal apparatus.
(j) Slowly and repeatedly raising and lowering arms outstretched to each side.

3. Radio distress signals via radiotelephone:
   (a) For MF Radiotelephone. Set transmitter to 2182 kHz and transmit the radiotelephone alarm signal (if available) briefly wait and then transmit the distress message as outline in (c) below.
   (b) For VHF FM Radiotelephone. Set transmitter to VHF FM Channel 16 and transmit the distress message as outlined in (c) below.
   (c) Transmit the distress message consisting of the word MAYDAY repeated three times followed by the vessel's identification repeated three times. Immediately continue by giving the position; nature of distress; number of people on board; nature of assistance required and any other information which may facilitate rescue authorities. Pause to await acknowledgement and if none heard within one minute, repeat the same again until acknowledged. Speak the distress message clearly and calmly.

4. Radio distress signals via satellite:
   (a) For satellite terminals equipped with a distress button. Activate the button and follow displayed menu instructions.
   (b) For satellite terminals without a distress button. Place a call to nearest Rescue Coordination Center or system operator and provide identification, position, nature of distress, number of persons on board and type of assistance requested.

5. Radio distress signals via Digital Selective Calling: The distress call should be composed to include ship's position information, the time at which the position was taken, and the nature of distress. If the DSC radio is connected to a navigation receiver, position and time-of-position should already be included. The distress call should be transmitted on VHF Channel 70 (156.525 MHz), 2187.5 kHz, or the HF frequencies 4207.5, 6312, 8414.5, 12577 and 16804.5 kHz. An acknowledgment of the distress call should be received on the DSC frequency. Once an acknowledgment has been received, the radio distress procedures via radiotelephone (above) should be followed on the associated voice channel: VHF Channel 16 (156.800 MHz), 2182, 4125, 6215, 8291, 12290 and 16420 kHz. For DSC distress calls on VHF Channel 70 and 2187.5 kHz, the radio distress procedures via radiotelephone should be followed on the associated voice channel if an acknowledgment is not received after a reasonable time (30 sec to 5 min).

6. Simple to follow instructions for the operation of auto alarms, radiotelephone, DSC and satellite communications equipment should be conspicuously posted in the radio rooms of all ships. Procedures outlined here are purposely brief. Complete information on emergency radio procedures is contained in Chapter 4 of Radio Navigational Aids (Pub. 117). The nearest U.S. Coast Guard rescue coordination center MUST be notified whenever an inadvertent distress alert is transmitted.

(Repetition NTM 1(41)05) (IMO/USCG)

(42) WORLDWIDE NAVIGATIONAL WARNING SERVICE (WWNWS).

The Worldwide Navigational Warning Service (WWNWS) was established in 1977 through the joint efforts of the International Hydrographic Organization (IHO) and the International Maritime Organization (IMO). The WWNWS is a coordinated global service for the promulgation by radio of information on hazards to navigation which might endanger international shipping.

The basic objective of the WWNWS is the timely promulgation by radio of information of concern to the ocean-going navigator. Such information includes the following: failure and/or changes to major navigational aids, newly discovered wrecks or natural hazards including icebergs in or near main shipping lanes, hazardous military operations and areas where search and rescue, anti-pollution operations and cable-laying or other underwater activities are taking place.

(42) WORLDWIDE NAVIGATIONAL WARNING SERVICE (WWNWS). (Continued).

Because of the wide ocean coverage of the WWNWS broadcasts, consideration is also being given to its selective use to augment other services for promulgating information concerning overdue and missing ships and aircraft.

For purposes of the WWNWS, the world has been divided into 16 Navigation Warning Areas (NAVAREAS) (see graphic page, I-1.36). Within each NAVAREA one national authority, designated the Area Coordinator, has assumed responsibility for the coordination and promulgation of warnings. Designated "National Coordinators" of other coastal states in a NAVAREA are responsible for collecting and forwarding information to the Area Coordinator. In the Baltic, a Sub-Area Coordinator has been established to filter information prior to passing to the Area Coordinator.

Coordinators are responsible for the exchange of information as appropriate with other coordinators, including that which should be further promulgated by charting authorities in Notice to Mariners.

The language used is English, although warnings may also be transmitted in one or more of the official languages of the United Nations.

Broadcast schedules appear in an Annex to the International Telecommunication Union "List of Radio-determination and Special Service Stations," Volume II, and in the lists of radio signals published by various hydrographic authorities (in the U.S., Pub. 117). Transmissions usually occur frequently enough during the day to fall within at least one normal radio watch period, and the information is repeated with varying frequency as time passes until either the danger has passed or the information on it has appeared as a Notice to Mariners. Transmission of information over the WWNWS will continue to be affected by the advent of services such as NAVTEX.

A document giving guidance and information on the WWNWS is available free from the International Hydrographic Bureau, 4 quai Antoine 1er, B.P. 445, MC 98011 MONACO CEDEX, Principality of Monaco.

The comments and recommendations of mariners are earnestly desired to allow improvements to be made both to individual NAVAREA broadcasts and to the overall system. To facilitate such comments, a post card (individual broadcast) report form and a single page (multiple broadcast) report form have been prepared and are available from the IHB. The reporting forms are preaddressed to the Chairman of the IHO Commission which oversees the WWNWS, but may be forwarded to a specific Area Coordinator at the mariner's option. The report forms request, in addition to general comments, information on the date, ship's position, station (with call sign) monitored, and the broadcast's scheduled frequency, language used, adherence to broadcast schedule (frequency and time) and quality of signal (strength, readability). Cooperation of the mariner in reporting such information is urged.

(42) WORLDWIDE NAVIGATIONAL WARNING SERVICE. (WWNWS). (Continued).

NAVAREA I (United Kingdom)
United Kingdom Hydrographic Office
Admiralty Way
Taunton, Somerset
TA1 2DN, United Kingdom
Phone: 44 1823 723316, Fax: 44 1823 322352
E-mail: rnwuser@ukhorn.u-net.com
Website: http://www.hydro.gov.uk

Baltic Sea Sub-Area NAVAREA I (Sweden)
Swedish Maritime Administration
BALTICO
S-601 78 Norrkoping, Sweden
Phone: 46 11 19 10 45
Fax: 46 11 238945 (07-15 UTC)
46 8 6017969 (15-07 UTC)
Telex: 64320 BALTICO S (07-15 UTC)
16060 STORDO S (15-07 UTC)
E-mail: ntm.baltico@sjofartsverket.se (07-15 UTC)
maritime@stockholmradio.se (15-07 UTC)
Website: http://www.sjofartsverket.se

NAVAREA II (France)
Monsieur le Directeur
EPSHOM BREST
13 Rue du Chatellier
BP 30316
29603 BREST CEDEX, France
Phone: 33 2 98 22 16 67
Fax: 33 2 98 22 14 32
E-mail: coord.navarea2@shom.fr
Website: http://www.shom.fr

NAVAREA III (Spain)
Instituto Hidrografico de la Marina
Plaza De San Severiano, 3
11007 Cadiz, Spain
Phone: 34 956 599 409
Fax: 34 956 599 396
Telex: 76147 MEDCO E/76102 MARIH E
E-mail: ihmesp@retemail.es

NAVAREAS IV AND XII (United States)
National Geospatial-Intelligence Agency
Attn: PVM (Mail Stop D-44)
4600 Sangamore Road
Bethesda, MD 20816-5003
USA
Phone: 301 227 3147,
Fax: 301 227 3731
Telex: 898334 NGA USA
E-mail: navsafety@nga.mil
Website: http://pollux.nss.nga.mil

NAVAREA V (Brazil)
Diretoria de Hidrografia e Navegacao
Rua Barao de Jaceguay S/N°
Ponta da Armacao
24048-900 Niteroi–RJ Brazil
Phone: 55 21 2613 8210/2620 0073
Fax: 55 21 2620 7921/2613 8210
E-mail: segnav@chm.mar.mil.br
Website: http://www.dhn.mar.mil.br

NAVAREA VI (Argentina)
Servicio de Hidrografia Naval
Avenida Montes de Oca 2124
C 1270ABV Buenos Aires
Argentina
Phone: 54 11 4301 0061/0067/2249
Fax: 54 11 4301 2249/4303 2299
E-mail: snautica@hidro.gov.ar
Website: http://www.hidro.gov.ar

NAVAREA VII (Republic of South Africa)
Hydrographic Office
Private Bag X1, Tokai
7966 Cape Town
Republic of South Africa
Phone: 27 21 787 2445/2444
Fax: 27 21 787 2228
E-mail: hydrosan@iafrica.com
Website: http://www.sanho.co.za

NAVAREA VIII (India)
National Hydrographic Office
Post Box No. 75
107-A Rajpur Road
Dehradun 248001, India
Phone: 91 135 2747365/2747360
Fax: 91 135 2748373
E-mail: nho@sancharnet.in
Website: http://www.hydrobharat.org

NAVAREA IX (Pakistan)
Hydrographer of the Pakistan Navy
Hydrographic Department
Naval Headquarters
11, Liaquat Barracks
Karachi 75530, Pakistan
Phone: 92 21 48506151/48506152
Fax: 92 21 9201623/9203246/9203258
Telex: 20774 HDRO PK
E-mail: hydropk@bol.edu.pk
Website: http://www.paknavy.gov.pk/hydro/index.asp

(42) WORLDWIDE NAVIGATIONAL WARNING SERVICE. (WWNWS). (Continued).

NAVAREA X (Australia)
RCC Australia
Australian Search and Rescue (AusSAR)
Australian Maritime Safety Authority (AMSA)
GPO Box 2181
Canberra ACT 2601, Australia
Phone: 61 2 6230 6811
Fax: 61 2 6230 6868
E-mail: rccaus@amsa.gov.au
Website: http://www.amsa.gov.au

NAVAREA XI (Japan)
Notices to Mariners Division
Hydrographic and Oceanographic Department
Japan Coast Guard
3-1, Tsukiji, 5-chome
Chuo-ku, Tokyo 104-0045, Japan
Phone: 81 3 3541 3812/3817/3685
Fax: 81 3 3542 7174/3248 1250
Telex: 2522222 JAHYD J
E-mail: tuho@jodc.go.jp
Website: http://www1.kaiho.mlit.go.jp/jhd-E.html

NAVAREA XIII (Russian Federation)
Department of Navigation and Oceanography
8,11 Liniya, B–34
St. Petersburg 199034, Russia
Phone: 7 812 277 5900/1511
Fax: 7 812 277 5900/323 7548
Telex: 121531 NAVIO RU
E-mail: gunio@homepage.ru

NAVAREA XIV (New Zealand)
Land Information New Zealand
LINZ Hydrographic Services
PO Box 5501
Wellington, New Zealand
Phone: 64 4 460 0110
Fax: 64 4 460 0161
E-mail: info@linz.govt.nz
Website: http://www.linz.govt.nz

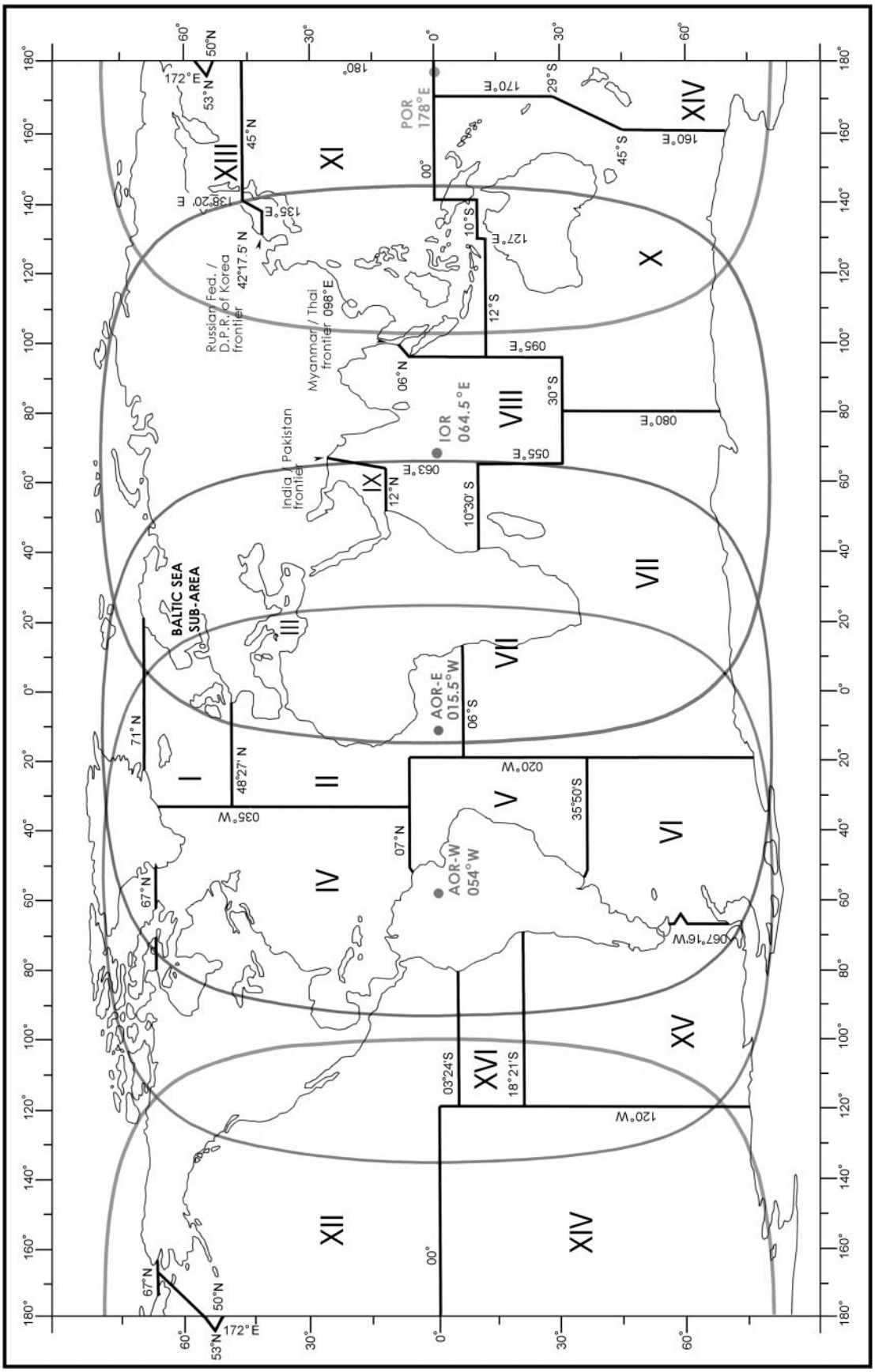
NAVAREA XV (Chile)
Director del Servicio Hidrografico y Oceanografico de la Armada de Chile
Casilla 324, Valparaiso, Chile
Phone: 56 32 266666
Fax: 56 32 266542
E-mail: shoa@shoa.cl
Website: http://www.shoa.cl

NAVAREA XVI (Peru)
Direccion de Hidrografia y Navegacion de la Marina
Avenida Gamarra No. 500
Chucuito, Callao 1, Peru
Phone: 51 1 465 8312/429 6019/429 9063
Fax: 51 1 465 2995
E-mail: dihidronav@dhn.mil.pe
Website: http://www.dhn.mil.pe/

Chairman, IHO Commission on Promulgation of Radio Navigational Warnings
4 quai Antoine 1er
B.P. 445
MC 98011 MONACO CEDEX
Principality of Monaco

Telephone: 337 93 10 81 00
Fax: 337 93 10 81 40
Telex: 479164 MC INHORG
E-mail: info@ihb.mc
Website: http://www.iho.shom.fr

(Supersedes NTM 1(42)05) (IMO/NGA)


BALTIC SEA SUB-AREA
I
II
III
IV
V
VI
VII
VIII
IX
X
XI
XII
XIII
XIV
XV
XVI
AOR-E 015.5°W
AOR-W 054°W
IOR 064.5°E
POR 178°E
Russian Fed. / D.P.R. of Korea frontier 42°17.5' N
Myanmar / Thai frontier 098°E
India / Pakistan frontier
071°N
48°27'N
035°W
07°N
06°S
020°W
35°50'S
67°N
067°16'W
03°24'S
18°21'S
120°W
06°N
095°E
30°S
080°E
055°E
063°E
12°N
10°30'S
12°S
127°E
10°S
135°E
138°20'E
45°N
53°N
172°E
50°N
180°
170°E
29°S
45°S
160°E
00°

(43) WEATHER OBSERVATION REPORTS.

All ships are encouraged to participate in the international Voluntary Observing Ship (VOS) program. For information, and to arrange assistance from a U.S. National Weather Service Port Meteorological Officer (PMO) contact:

Voluntary Observing Ship Program
NOAA/NWS National Data Buoy Center (W/OPS51)
Building 3203, Room 305B
Stennis Space Center, MS 39529-6000
Telephone: (228) 688-1457
Fax: (228) 688-3923
E-mail: vos@noaa.gov
Website: http://www.vos.noaa.gov

Details on the coding and transmission of weather observations may be found in "Observing Handbook No. 1" provided to ships participating in the U.S. VOS program. The U.S. VOS program also makes available a PC software program known as Amver/SEAS which greatly assists in coding and transmitting VOS observations and Amver position reports.

Detailed information on the dissemination of National Weather Service marine products including radiofax, such as frequency and scheduling information may be found in NGA Publication 117, the British Admiralty List of Radio Signals Volume 3(2), and at http://www.nws.noaa.gov/om/marine/home.htm (includes links to products).

GENERAL INSTRUCTION FOR REPORTING WEATHER OBSERVATIONS

CODED WEATHER MESSAGES: All weather report messages by radio or Inmarsat will be coded in World Meteorological Organization (WMO) ship synoptic code FM13-IX.

STANDARD SYNOPTIC OBSERVATION TIMES: The regular synoptic hours for reporting are 0000, 0600, 1200, and 1800 UTC. However, watch schedules and other ship functions sometimes make it impractical to meet the synoptic weather reporting schedule. Weather observations may also be submitted at the intermediate hours of 0300, 0900, 1500, and 2100 UTC. These should be reported as soon as possible, but no later than three (3) hours after the synoptic observation time.

TIMELINESS AND REPORT VALUE: All weather reports should be transmitted as soon as possible to the National Weather Service. Weather reports can be ingested by computer forecast models for only for a limited time after the reporting hour. Major computer programs are run at all synoptic hours and a few programs are run every three (3) hours. Forecasters look at, and use, all timely reports in making their forecasts and warnings.

SPECIAL WEATHER OBSERVATIONS

TROPICAL STORMS/HURRICANES: Hurricane season has been designated May 15 through November 30 because of the number of tropical storms and hurricanes during the period. Many special programs are in operation during this season and it is requested that the observation schedule, when in the vicinity of a tropical storm or hurricane, be set to transmit weather reports at least every three (3) hours (00, 03, 06, 09, etc.). Hourly reports when within a storm (winds over 48 knots) would be very helpful, if ship routine permits.

SPECIAL REQUESTS FOR OBSERVATIONS: The U.S. National Weather Service may request ships located in areas of suspected storm development to take special observations at more frequent intervals than the routine six (6) hourly synoptic observation times. If your ship happens to be in such an area, your report will be helpful even though conditions may not appear bad enough to warrant a special observation.

OBSERVATIONS DURING STORM CONDITIONS: Whenever TROPICAL STORM, TYPHOON, or HURRICANE conditions are encountered anywhere, "SAFETY OF LIFE AT SEA CONVENTION," Chapter V, requires all ships to take special observations and transmit the report to the closest national meteorological service via the most convenient radio or Inmarsat station. In addition to this requirement, it is highly desirable that weather reports be transmitted hourly, if possible; but in any case, not less frequently than every three (3) hours.

EXTRATROPICAL STORMS: Submit a weather report message as soon as the average wind equals or exceeds 48 knots. Report at least every three (3) hours when under STORM conditions.

COASTAL REPORTS: The weather starts changing as soon as the air moves from land out over the water. Ship weather reporting should continue as close to the coast as ship routine permits. When within 200 miles of the U.S. or Canadian coastlines, reports are requested every three (3) hours.

(43) WEATHER OBSERVATION REPORTS. (Continued).

TRANSMISSION OF WEATHER REPORTS

Below is a summary of the primary means by which VOS observations are transmitted to the National Weather Service. Details on these and other available transmission services may be found in "Observing Handbook No. 1."

INMARSAT-A and -B: Follow the instructions with your Inmarsat terminal for sending a telex message. Use the Special Access Code 41 (except when using the Amver/SEAS software in compressed binary format with Inmarsat-C terminals), and do not request a confirmation when sending. No cost is involved with this transmission. Below is a typical procedure for using an Inmarsat-A and -B transceiver:

1. Select appropriate Land Earth Station Identity (LES-ID). (See table below.)
2. Select routine priority.
3. Select duplex telex channel.
4. Initiate the call. Wait for the GA+ signal.
5. Select the dial code for meteorological reports, 41+.
6. Upon receipt of our answerback, NWS OBS MHTS, transmit the weather message starting with BBXX and the ship's call sign. The message must be ended with 5 periods. Do not send any preamble. Example:

GA+
41+
NWS OBS MHTS
BBXX WLXX 29003 99131 70808 41998 60909 10250 2021/ 4011/ 52003 71611 85264 22234 00261
20201 31100 40803.....

The 5 periods indicate the end of the message, and must be included after each report. Do not request a confirmation.

INMARSAT-C: All major Inmarsat-C terminals have the ability to transmit the encoded weather observation (BBXX) with the Special Access Code 41. No cost is involved with this transmission. Do not request a confirmation when sending. The detailed instructions necessary to setup and address the Code 41 message and transmission instructions according to the different manufacturers are listed on the VOS website at http://www.vos.noaa.gov/vos_resource.shtml.

Land-Earth Station Identity (LES-ID) of U.S. Inmarsat Stations Accepting Ships Weather (BBXX) and Oceanographic (JJYY) Reports

Operator	Service	Station ID			
		AOR-W	AOR-E	IOR	POR
TELENOR	A	01	01	01	01
TELENOR	B	01	01	01	01
TELENOR	C	001	101	304	201
TELENOR	C (Amver/SEAS)	001	101	304	201
STRATOS/IDB	A (octal ID)	13-1	13-1	13-1	13-1
STRATOS/IDB	A (decimal ID)	11-1	11-1	11-1	11-1
STRATOS/IDB	B	013	013	013	013

Use abbreviated dialing code 41. Do not request a confirmation.

Some common mistakes include: (1) failure to end the message with 5 periods when using Inmarsat-A and -B, (2) failure to include BBXX in the message preamble, (3) incorrectly coding the Date, Time, Latitude, Longitude, or quadrant of the globe, (4) requesting a confirmation (which increases cost to NWS).

If your ship's Inmarsat terminal does not contain a provision for using abbreviated dialing code 41, telex address 0023089406 may be used via Telenor. Please note that the ship will incur telecommunication charges for any messages sent to telex address 0023089406 using any Inmarsat earth station other than Telenor.

EMAIL TRANSMISSIONS: In the event that your ship's Inmarsat equipment fails or you are not mandated to have an Inmarsat system onboard your vessel, weather observations can be emailed directly into the NWS gateway system. Send your emailed observations to: webship@inetsrv.arh.noaa.gov. Place your observation in the body of the message and end your encoded observation with an equal sign (=). This tells the computer to end transmission. Detailed instructions on setup, addressing, and transmitting the message are listed on the VOS website at http://www.vos.noaa.gov/vos_resource.shtml. Be

(43) WEATHER OBSERVATION REPORTS. (Continued).

advised that the ship is currently responsible for paying the email transmission costs.

SITOR OR SINGLE SIDEBAND WEATHER REPORTS THROUGH THE U.S. COAST GUARD: As the usual call up includes "I have weather for you" type of information, no address (i.e., SHIP OBS NWS SILVER SPRING MD) is necessary. The U.S. Coast Guard automatically transmits weather reports only to the National Weather Service. When acknowledged, start the message with the group BBXX followed by the ship's call sign and then proceed with the numbers of the report. Some U.S. Coast Guard radio stations will accept weather reports by voice over single sideband radio. The procedures are the same as above. Phonetically pronounce the group BBXX, the ship's call sign, and then proceed with the numbers of the report. For the latest information on U.S. Coast Guard frequencies, visit their webpage at http://www.navcen.uscg.gov/marcomms.

WEATHER REPORTS THROUGH SPECIFIED U.S. COMMERCIAL RADIO STATIONS: If the U.S. Coast Guard cannot be contacted and ship is not Inmarsat equipped, as a backup, U.S. commercial radio stations specified in the publication "Observing Handbook No. 1" may be contacted to relay weather messages.

(Supersedes NTM 1(43)05) (NOAA/NWS)

(44) RADAR BEACONS (RACONs).

Radar beacons (RACONs) are radar responder devices designed to produce a distinctive image on the screens of ship's radar sets, thus enabling the mariner to determine his position with greater certainty than would be possible using a normal radar display alone.

The U.S. Coast Guard operates approximately 80 radar beacons (RACONs) as maritime navigational aids in the Great Lakes, off the Atlantic, Pacific, and Gulf coasts, and on the North Slope of Alaska. RACONs are used to mark and identify points on shore; channel separation, LNB, and other buoys; channel entrances under bridges; and uncharted hazards to navigation (the Morse letter "D", dash-dot-dot, has been reserved for this purpose). RACON marks displayed on a radar screen are Morse characters typically of length 1 to 2 miles, always start with a dash, and always extend radially outward from the radar target marked by the beacon. RACON locations and identifications are included on most marine navigation charts.

RACONs should be visible to most commercial shipboard radar systems on vessels 6-20 miles from the RACON installation, regardless of radar size. No additional receiving equipment is required. Some precautions are necessary, however, if use of RACONs is desired. Radars that operate in the 10 cm band (2900-3100 MHz) are usually installed as a second radar on larger vessels, and may not respond to RACONs. The Coast Guard now installs dual band (3 cm and 10 cm) RACONs in most locations. In addition, rain clutter control switches on radars must be switched off or, if necessary, on low to ensure that the RACON is visible. Finally, most RACONs operating in the U.S. are frequency agile RACONs. Pulse correlation circuitry (interference or clutter rejection on some radars) installed on most newer radars, if on, may prevent the radar from displaying some RACONs. This circuitry should be switched off.

(Repetition NTM 1(44)05) (USCG)

(45) NAVTEX.

NAVTEX is an international automated medium frequency (518 kHz) direct-printing service for promulgation of navigational and meteorological warnings and forecasts, as well as urgent marine safety information to ships. It was developed to provide a low-cost, simple, and automated means of receiving this information aboard ships at sea within approximately 200 nautical miles of shore. NAVTEX receivers may be user adjusted to screen incoming messages to not print certain categories of messages of no interest to a particular user and prevent printing of messages previously received. Mariners who do not have NAVTEX receivers but have SITOR radio equipment can also receive these broadcasts by operating it in the FEC mode and tuning to 518 kHz. Internationally, NAVTEX is also broadcast on the alternate NAVTEX frequencies of 490 and 4209.5 kHz.

The Coast Guard broadcasts NAVTEX messages from:

BOSTON, MA (NMF): Identification (B_1): F
Schedule (UTC): 0045, 0445, 0845, 1245, 1645, 2045

CHESAPEAKE (PORTSMOUTH), VA (NMN): Identification (B_1): N
Schedule (UTC): 0130, 0530, 0930, 1330, 1730, 2130

SAVANNAH, GA: (NMN) Identification (B_1): E
Schedule (UTC): 0040, 0440, 0840, 1240, 1640, 2040

(45) NAVTEX. (Continued).

MIAMI, FL (NMA): Identification (B_1): A
Schedule (UTC): 0000, 0400, 0800, 1200, 1600, 2000

ISABELLA (SAN JUAN), PR (NMR): Identification (B_1): R
Schedule (UTC): 0200, 0600, 1000, 1400, 1800, 2200

NEW ORLEANS, LA (NMG): Identification (B_1): G
Schedule (UTC): 0300, 0700, 1100, 1500, 1900, 2300

KODIAK, AK (NOJ): Identification (B_1): J
Schedule (UTC): 0300, 0700, 1100, 1500, 1900, 2300

KODIAK, AK (NOJ): Identification (B_1): X
Schedule (UTC): 0340, 0740, 1140, 1540, 1940, 2340

ASTORIA, OR (NMC): Identification (B_1): W
Schedule (UTC): 0130, 0530, 0930, 1330, 1730, 2130

POINT REYES (SAN FRANCISCO), CA (NMC): Identification (B_1): C
Schedule (UTC): 0000, 0400, 0800, 1200, 1600, 2000

CAMBRIA, CA (NMC): Identification (B_1): Q
Schedule (UTC): 0045, 0445, 0845, 1245, 1645, 2045

HONOLULU, HI (NMO): Identification (B_1): O
Schedule (UTC): 0040, 0440, 0840, 1240, 1640, 2040

GUAM (NRV): Identification (B_1): V
Schedule (UTC): 0100, 0500, 0900, 1300, 1700, 2100

Information broadcast over NAVTEX includes weather forecasts, offshore marine advisory warnings, search and rescue information, and navigational information that applies to waters from the line of demarcation (separating Inland Rules waters from COLREG Rules waters) to 200NM offshore. Navigational information that affects the safety of navigation of deep draft (15 feet or more) vessels within U.S. Inland Rules waters will also be included.

NAVAREA IV/XII, HYDROLANT/HYDROPAC and ice information broadcasts are issued over HF SITOR/NBDP (Simplex Telex Over Radio/Narrow Band Direct Printing) from Coast Guard Stations in Boston, Point Reyes, Honolulu and Guam. Broadcasts are made on 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz and 22376 kHz. See NGA Pub. 117, Radio Navigational Aids, for schedules.

(Repetition NTM 1(45)05) (USCG)

(46) SATELLITE DETECTION OF DISTRESS SIGNALS.

The Cospas-Sarsat System is an international cooperative effort using satellites to detect distress beacons carried by aircraft, vessels, and persons operating in harsh remote environments. A constellation of satellites in low- earth, polar orbits detects and relays distress beacon signals to ground stations. The system delivers distress alerting and position information to the appropriate Rescue Coordination Center.

Extensive coverage is provided over the North American maritime region and other areas for 121.5/243.0 MHz; the 406 MHz system is global in its coverage.

In addition, a network of geostationary satellites is used to complement the polar orbiting constellation. Satellites in orbit over a fixed point on the equator at 22,000 miles continuously monitor the earth within their view, about 60% of the earth's surface. These satellites process 406 MHz beacon signals only. The geostationary satellites support immediate distress alerting for beacons within their field of view. The United States, India and Russia are currently operating participating satellites. Other nations plan to participate in the near future.

(46) SATELLITE DETECTION OF DISTRESS SIGNALS. (Continued).

EMERGENCY POSITION INDICATING RADIO BEACON (EPIRB).

The Emergency Position Indicating Radio Beacon (EPIRB) is an emergency radio transmitting device used for maritime distress alerting and locating. Table 1 provides an overview of the different classes of EPIRBs currently in existence. Table 2 gives summary comparison of the significant differences between the 406 MHz and 121.5/243.0 MHz beacons. It should be noted that classes A,B,C, and S are gradually being phased out and replaced by Satellite EPIRBs of Cat I and II. For current carriage requirements refer to Navigation and Vessel Inspection Circular No. 3-99; any questions concerning requirements to carry EPIRBs or other safety equipment should be referred to the U.S. Coast Guard (G-MSE-4) Lifesaving and Fire Safety Division, telephone (202) 267-1444.

TABLE 1

CLASS	FREQUENCY	DESCRIPTION	DETECTION
Cat I	406 MHz with 121.5 MHz homing signal	Float free beacon	Polar orbiting and geostationary satellites, high flying aircraft
Cat II	406 MHz with 121.5 MHz homing signal	Manually activated	Polar orbiting and geostationary satellites, high flying aircraft
A	VHF-AM 121.5 & 243.0 MHz	Float free	Polar orbiting satellites and high flying aircraft
B	VHF-AM 121.5 & 243.0 MHz	Manually activated or water-activated battery	Polar orbiting satellites and high flying aircraft
S	VHF-AM 121.5 & 243.0 MHz	Manually activated (same as Class B); required for survival craft (SOLAS)	Polar orbiting satellites and high flying aircraft
Inmarsat-E	1646 MHz	Float free beacon	Satellites

TABLE 2
SUMMARY COMPARISON OF 406 MHz AND 121.5 MHz BEACONS IN THESE CRITICAL AREAS

406 MHz EPIRB	121.5 MHz EPIRB
Coverage:	
Global.	Ground station dependent; ground stations have an effective radius of about 1800NM. Current coverage: about one-third of the world.
Reliability- False Alerts/False Alarms:	
All alerts come from beacons. Satellite beacon transmissions are digital coded signals. Satellites process only coded data, other signals are rejected.	Only about 1 in 4 alerts come from beacons. Satellites cannot discern beacon signals from many non-beacon sources. Beacons transmit anonymously.
About 1 in 10 alerts are actual distress.	Fewer than 1 in 1000 alerts are actual distress.

(46) SATELLITE DETECTION OF DISTRESS SIGNALS. (Continued).

406 MHz EPIRB	121.5 MHz EPIRB
Individual beacon-unique coding and registration allow rapid incident corroboration. Registration became mandatory 9/13/94. About 90% of 406 MHz beacons are registered. More than 70% of 406 MHz false alarms are resolved by a phone call to registration POCs.	Since 121.5 MHz beacons transmit anonymously, the only way to ascertain the situation is to dispatch resources to investigate–a costly disadvantage.
Alerting	
First alert confidence is sufficient to warrant launch of SAR assets. Earlier launches put assets on scene earlier–Average 2 hrs saved in maritime, 6 hrs in inland. These savings are survival-significant.	High false alarm rate makes first-alert launch infeasible. Absent independent distress corroboration, RCCs must wait for additional alert information.
Average initial detection/alerting by orbiting satellite is 45 minutes–worst case about 60 minutes.	Same as 406 MHz.
Average time between subsequent satellite passes is about 60 minutes.	Same as 406 MHz.
Vessel/aircraft ID, point of contact information provided with alerts allows rapid corroboration or stand-down.	Alerts are anonymous 121.5 MHz technology not capable of transmitting data.
Allows false alarm follow-up to continuously improve system integrity/reliability.	No capability.
Position Information:	
2–5 km accuracy on average. Position calculated by Doppler shift analysis.	10–20 km accuracy on average. Position calculated by Doppler shift analysis.
Locating the Target:	
Superior alert position accuracy limits initial position uncertainty to about 40 sq. km.	Initial position uncertainty is about 700 sq. km on average.
121.5 MHz homing signal facilitates target location by radio detection finder-equipped search units.	Same as 406 MHz.

The nearest U.S. Coast Guard rescue coordination center MUST be notified whenever an inadvertent EPIRB distress alert is transmitted.

Distress beacon false alarms are a major problem. False alarms delay response, divert scarce response resources from real distress situations, and can quickly overburden the SAR system. Minimize false alarms with proper handling and storage of EPIRBs; understand and comply with manufacturer's operating instructions for your particular EPIRB and tune a radio to 121.5 or 243.0 MHz to monitor the frequency/detect any inadvertent activation. EPIRBs with two-condition, automatic-activation switches (e.g. out of bracket and in water) have demonstrated significantly reduced false alarm rates with no adverse impact on automatic distress performance. The aviation equivalent, the Emergency Locator Transmitter (ELT), has an extremely poor track record in regard to false alarms. While the EPIRB does not have the same engineering problems, the EPIRB user must be aware of how false activations can quickly overburden search and rescue resources.

Inadvertent activations should be reported immediately to the nearest RCC to protect system integrity and prevent costly false alarm response.

EPIRB owners should routinely test their beacons in accordance with manufacturer instructions, and examine them for water tightness and battery expiration date. FCC rules allow class A, B, and S EPIRBs to be turned on briefly (one second only) during the first five minutes of any hour. Signal presence can be detected by an FM radio tuned to 99.5 MHz or an AM radio

(46) SATELLITE DETECTION OF DISTRESS SIGNALS. (Continued).

tuned to any vacant frequency and located close to an EPIRB.

406 MHz beacon registration has been mandatory since 13 September 1994. Satellite emergency position-indicating radio beacon (EPIRB) is intended to save your life, and is also required by Federal Communications Commission regulations.

NOAA maintains the U.S. registration data base. When a 406 MHz alert is received, the system automatically checks the data base for an ID match and appends available registration information to the alert message to the responsible RCC. Registration point of contact-provided position information can be used in conjunction with geostationary satellites immediate alerting to allow SAR response 45-90 minutes sooner than otherwise possible—a survival-significant response advantage. In circumstances where the Cospas-Sarsat System is not able to calculate a distress position, registration data may provide the only link to rescue.

If you purchase a new or a used 406 MHz EPIRB, you MUST register it with NOAA. If you change your boat, your address or your phone number, you MUST re-register your EPIRB with NOAA.

Request 406 MHz EPIRB registration forms from, and mail or fax completed forms to:

NOAA SARSAT
E/SP3, RM 3320, FB-4
5200 Auth Road
Suitland, MD 20746-4304

or call (301) 457-5678 (fax: (301) 568-8649) for further information on registering EPIRBs. You may also register or update your beacon information online at http://www.beaconregistration.noaa.gov. NOAA sends a decal to be affixed to the beacon to confirm registration and as ready evidence of compliance. NOAA contacts all registered beacon owners on a two year schedule to maintain database accuracy. This service is free of charge. Please keep your registration current - IT MAY SAVE YOUR LIFE.

Mariners are advised that Inmarsat has announced that the Inmarsat-E EPIRB will be withdrawn from service effective 1 December 2006. Inmarsat will offer one-for-one replacements for the Inmarsat-E to registered Inmarsat-E owners free of charge.

Mariners are advised that the Cospas-Sarsat System will cease to monitor the frequency 121.5 MHz effective 1 February 2009.

(Supersedes NTM 1(46)05) (USCG)

(47) HF AND VHF RADIOTELEPHONE AND RADIOTELEX MARINE SAFETY BROADCASTS.

Urgent and routine broadcasts of marine safety information are announced on VHF Channel 16 (156.8 MHz) and made on Channel 22A (157.1 MHz), the ship station transmit frequency portion of Channel 22, of Appendix 18 of the International Telecommunications Union (ITU) Radio Regulations.

The Coast Guard normally broadcasts selected coastal navigational warnings, local major navigational warnings, and local minor navigational warnings on VHF Channel 22A. NAVTEX broadcasts normally include only coastal navigational warnings and weather information. Medium frequency radiotelephone broadcasts can include coastal or selected coastal and local major navigational warnings. These single sideband voice broadcasts are announced on 2182 kHz and are made on 2670 kHz.

Questions and comments concerning VHF marine safety broadcasts should be addressed to the local Coast Guard District staff, or to:

Commandant (CG-622)
United States Coast Guard
Washington, DC 20593-0001
E-mail: CGCOMMS@COMDT.USCG.MIL

FORMAT OF MARINE INFORMATION BROADCAST/MESSAGES.

1. Urgent Marine Information Message.

a. Radiotelephone:

(1) 2182 kHz and/or Channel 16 (156.8 MHz). PAN-PAN (3 times)
HELLO ALL STATIONS THIS IS (voice call sign twice)
(brief identifying data) LISTEN (2670 kHz or Channel 22A) OUT

(47) HF AND VHF RADIOTELEPHONE AND RADIOTELEX MARINE SAFETY BROADCASTS. (Continued).

(2) 2670 kHz and/or Channel 22A (157.1 MHz). PAN-PAN (3 times)
HELLO ALL STATIONS THIS IS (voice call sign twice) break (text) break
THIS IS (voice call sign once) OUT

b. Cancellation message:

(1) Radiotelephone: 2182 kHz and/or Channel 16 (156.8 MHz). PAN-PAN
HELLO ALL STATIONS HELLO ALL STATIONS HELLO ALL STATIONS
THIS IS (voice call sign once, date and time of message and brief identifying data
on canceled urgent traffic) CANCEL PAN-PAN THIS IS (voice call sign once) OUT

2. Safety Marine Information Message Format.

Radiotelephone:

(1) 2182 kHz and/or Channel 16 (156.8 MHz) SECURITE (3 times)
HELLO ALL STATIONS THIS IS (voice call sign twice)
COAST GUARD MARINE INFORMATION BROADCAST (or)
HURRICANE ADVISORY/STORM WARNING etc. LISTEN
(2670 kHz and/or Channel 22A) OUT

(2) 2670 kHz and/or Channel 22a (157.1 MHz) SECURITE (3 times)
HELLO ALL STATIONS THIS IS (voice call sign once) break (text) break
THIS IS (voice call sign once) OUT

3. Scheduled Broadcast Format.

Radiotelephone:

(1) 2182 kHz and/or Channel 16 (156.8 MHz). HELLO ALL STATIONS (3 times)
THIS IS (voice call sign twice)
COAST GUARD MARINE INFORMATION BROADCAST LISTEN
(2670 kHz and/or Channel 22A) OUT

(2) 2670 kHz and/or Channel 22A (157.1 MHz) HELLO ALL STATIONS (3 times)
THIS IS (voice call sign once) break (text) break THIS IS
(voice call sign once) OUT

a. No preliminary announcement is made for HF broadcasts.

b. When no information is to be transmitted during a scheduled broadcast, the station shall make the following transmission after the call: “NO MARINE INFO BCST THIS SCHEDULE.”

4. Abbreviations.

a. In order to reduce the circuit time of Marine Information Broadcasts, readily recognizable abbreviations shall be used by the originator where there is no chance of ambiguity.

b. When broadcasting National Weather Service (NWS) information the exact text as received from the NWS shall be transmitted.

(Repetition NTM 1(47)05) (USCG)

(48) MARAD ADVISORIES.

MARAD Advisories rapidly disseminate information on government policy, danger and safety issues pertaining to vessel operations, and other timely maritime matters. MARAD Advisories are periodically issued by the U.S. Maritime Administration (MARAD) to vessel masters, operators and other U.S. maritime interests. The texts of MARAD Advisories are published in weekly Notice to Mariners No. 1, and can be accessed through the National Geospatial-Intelligence Agency’s Maritime Safety Information website (http://pollux.nss.nga.mil) and through the MARAD website (http://marad.dot.gov).

MARAD ADVISORIES (In force 29 December 2005)

(48) MARAD ADVISORIES. (Continued).

MARAD ADVISORY NO. 00-07 (221500Z NOV 00)
SUBJECT: YEMEN
TO: ALL OPERATORS OF U.S. FLAG AND EFFECTIVE U.S. CONTROL VESSELS

1. The National Geospatial-Intelligence Agency (NGA) requested that the Maritime Administration (MARAD) issue HYDROPAC 1694/00(62) as a MARAD Advisory to ensure wider dissemination to the maritime community. Below is HYDROPAC 1694/00(62) in its entirety.
2. Due to recent events in Yemen, mariners are advised to use increased caution when approaching or entering Yemeni waters. Special Warning 113 is still in effect. See U.S. Notice to Mariners 45/2000 date November 4, 2000 or the NGA Marine Navigation website at http://pollux.nss.nga.mil.

MARAD ADVISORY NO. 02-02 (131730Z JUN 02)
SUBJECT: VESSEL REPORTING TO NATO SHIPPING CENTER FOR MERCHANT SHIPS TRANSITING THE SUEZ CANAL, UPDATE
TO: OPERATORS OF U.S. FLAG VESSELS AND AND OTHER MARITIME INTERESTS

1. The NATO Shipping Center in Northwood, UK continues to support NATO Naval forces deployed in the Eastern Mediterranean. These forces have established a deterrent naval presence and are conducting surveillance and monitoring operations which has been extended until 01 Jan 03. It is intended that the Shipping Center provide shipping information to the warships while also acting as a point of contact for the merchant marine.
2. The strategic significance of the Suez Canal during a period of tension in the Middle East, together with the campaign against terrorists are the prime reasons for the naval deployment. The surveillance operation and activation of the Center have been discussed with Lloyds of London who have indicated that a deterrent naval presence would have a beneficial stabilizing influence on insurance premiums in the region.
3. In order for the Shipping Center to be effective the cooperation of the merchant marine of NATO and Partner Countries is required. Specifically, details are requested of ships intending to transit the Suez Canal, or which have completed the North bound transit, between Longitude 28˚ East and Port Said, EG (Longitude 28˚ East passes through the Isle of Rhodes, GR).
4. In order to give adequate time for the data to be compiled and sent to the NATO warships, the information is required 24 hours in advance. Provision of this information will assist in the compilation of an accurate shipping plot for the surveillance and monitoring of shipping by NATO naval forces in the region. It will also reduce VHF traffic between merchant and naval vessels.
5. The preferred method for merchant vessels to report to the Shipping Center is by e-mail. Alternate means are by fax or telephone.
   E-mail: shippingcentre@eastlant.nato.int
   Website: http://www.eastlant.nato.int/natosc/index.htm
   Fax: +44 1923 843575
   Phone: +44 1923 843574
6. In order to further encourage reporting to the Shipping Center, the data requested has been significantly reduced as detailed below. While the reporting of shipping data is on a voluntary basis, Nations are strongly encouraged to support this NATO operation which, by providing a stabilizing naval presence, brings benefits to shipping in the region.
   Ship Data:
   1. Ship's Name
   2. International Call Sign
   3. IMO Number
   4. General Nature of Cargo
   Voyage Data:
   5. Southbound Ships
      (a) ETD and Name of Last Port of Call
      (b) ETA Suez
   6. Northbound Ships
      (a) ETD Suez
      (b) Next Port
7. For further information regarding this Advisory, contact the Maritime Administration, Office of Ship Operations, Division of Operations Support, Code MAR-613 Room 2122, 400 Seventh Street SW, Washington, DC 20590; Telephone (202) 366-5735, Fax (202) 366-3954.
8. This Advisory cancels MARAD Advisory 01-08 (21 Dec 01).

(48) MARAD ADVISORIES. (Continued).

MARAD ADVISORY NO. 05-01 (221817Z JUL 05)
SUBJECT: THREAT INFORMATION AND MARITIME INDUSTRY REPORTING OF SUSPECTED/ACTUAL TERRORIST INCIDENTS
TO: OPERATORS OF U.S. FLAG AND EFFECTIVE U.S. CONTROLLED VESSELS AND OTHER MARITIME INTERESTS
This MARAD Advisory updates and reiterates information to the maritime industry and vessels regarding sources of threat information and reporting of hostile incidents.

1. The Coast Guard's National Response Center (NRC) should be notified of any suspected domestic terrorist incident, particularly those affecting transportation systems in addition to oil and hazardous substance releases. All reports of suspected or actual incidents are to be reported to the NRC at 800-424-8802 or 202-267-2675. Suspicious activity should also be reported to the local FBI office. The following website lists telephone numbers for all the FBI field offices: http://www.fbi.gov/contact/fo/fo.htm.
2. Hostile actions directed at merchant shipping are a present and growing problem. These hostile actions include piracy, theft and terrorism. In order to establish a reliable database of incidents to define the area and degree of the problem, a database has been instituted by the National Geospatial-Intelligence Agency (NGA) as the Anti-Shipping Activity Messages (ASAM) file. This file can be accessed via the internet at NGA's Maritime Safety Information website: http://pollux.nss.nga.mil. Another excellent threat assessment report produced weekly by the Office of Naval Intelligence (ONI) is the ONI Worldwide Threat to Shipping. This report is also available on the NGA website.
3. NGA has also established Ship Hostile Action Report (SHAR) procedures to rapidly disseminate information within the U.S. Government on hostile actions against U.S. merchant ships. The procedures for sending SHAR reports are detailed in NGA Publication 117, Radio Navigational Aids, Edition 2005, on page 4-15. The Maritime Administration (MARAD) urges all vessels to carry Pub 117, which can also be downloaded from NGA's above listed website.
4. It should be noted that neither the ASAM nor SHAR reports are a distress message. U.S. and effective U.S. controlled (EUSC) vessels under attack or threat of attack may request direct assistance from U.S. naval forces by following the emergency call-up procedures in Chapter 4, Part II of Pub 117.
5. All U.S.-flag vessels required by MARAD regulation, agreement, or those who voluntarily file Amver position reports, are reminded of the importance in filing voyage and update reports. Those ships operating in the north Arabian Sea, Gulf of Oman, Persian Gulf, Gulf of Aden, Red Sea and the Suez Canal are reminded to file Amver position update reports every 24 hours vice every 48 hours.
6. All U.S.-flag operators are requested to forward this Advisory to their ships by the most expedient means. This Advisory will subsequently be listed in NGA's website, as well as MARAD's website: http://www.marad.dot.gov/headlines.
7. This Advisory cancels and replaces MARAD Advisories 01-07, 02-05, 02-07 and 03-04.
8. For further information regarding this Advisory, contact the Maritime Administration, Office of Ship Operations, Code MAR-613, Room 2122, 400 7th Street, Washington, DC 20590; Telephone 202-366-5735, or by e-mail to opcentr1.marad@dot.gov.

MARAD ADVISORY NO. 05-03 (281800Z OCT 05)
SUBJECT: SOMALI PIRACY
TO: OPERATORS OF U.S. FLAG AND EFFECTIVE U.S. CONTROLLED VESSELS AND OTHER MARITIME INTERESTS
This MARAD Advisory on piracy off the coast of Somalia originated from the National Maritime Intelligence Center, Office of Naval Intelligence.

1. The National Maritime Intelligence Center (NMIC) advises that two more at sea merchant vessel hijackings on 18 and 20 October off the east coast of Somalia, demonstrates pirates ability to conduct at sea hijackings from as far south as Kismayo (02 S) to as far north as Eyl (08 N), and out to a distance of 170 NM.
2. All vessels are advised to remain at least 200 NM from the east coast of Somalia. All merchant vessels transiting the coast of Somalia, no matter how far offshore, should increase anti-piracy precautions and maintain a heightened state of vigilance. Pirates are reported to have used previously hijacked ships as bases for further attacks.
3. Another reported pirate tactic has been to issue a false distress call to lure a ship close inshore. Therefore, caution should be taken when responding to distress calls keeping in mind it may be a tactic to lure a vessel into a trap.
4. Victimized vessels report two to three 6 to 9 meter speedboats with 3 to 6 armed men per vessel armed with AK-47s and shoulder launched rockets, opening fire on their vessels in broad daylight in order to intimidate them into stopping.
5. To date, vessels that increase speed and take evasive maneuvers avoid boarding while those that slow down are boarded, taken to the Somali coastline, and released after successful ransom payment, often after protracted negotiations of as much as 11 weeks.

(48) MARAD ADVISORIES. (Continued).

6. For further information regarding this advisory, contact the Maritime Administration, Office of Ship Operations, Code MAR-613, room 2122, 400 7th street, Washington, DC 20590; Telephone 202-366-5735, or by e-mail to opcentr1.marad@dot.gov.

(Supersedes NTM 1(48)05) (U.S. MARITIME ADMINISTRATION)

(49) NAVIGATION RULES, INTERNATIONAL-INLAND.

The latest edition of the Coast Guard publication Navigation Rules was promulgated in March 1999. This book contains the International Regulations for Preventing Collisions at Sea, commonly called the 72 COLREGS, and the Inland Navigation Rules which supersede the old Inland Rules, Western Rivers Rules, Great Lakes Rules, and other Pilot rules. The book also includes sections on COLREGS demarcation lines, penalty provisions, alternative compliance, the Vessel Bridge-to-Bridge Radiotelephone Regulations, and Vessel Traffic Services.

PENALTIES: All vessel operators, whether recreational or commercial, are required to understand and follow these Navigation Rules. Violation of the Navigation Rules or negligent operation of a vessel may result in civil penalties up to $5000.

CARRIAGE REQUIREMENT: The operator of each self-propelled vessel 12 meters or more in length is required to carry on board and maintain for ready reference a copy of the Inland Navigation Rules (contained in this publication).

HOW TO ORDER: The Navigation Rules: International-Inland is available from the Government Printing Office for $19.00. To order by telephone using VISA, MasterCard or Discover Card call 1-866-512–1800 or in Washington, DC call (202) 512-1800, ask for the book by name and give GPO stock number 050–012–00407–2, or mail check or money order payable to Superintendent of Documents, to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The book can also be ordered online at http://bookstore.gpo.gov. COMDTINST M16672.2D (Navigation Rules, International-Inland) is available online at http://www.navcen.uscg.gov/mwv/navrules/download.htm.

CHANGES: Changes are published, as they occur, in the Notice to Mariners and appear in Summary of Corrections (Volume 5). For questions concerning the Navigation Rules please write to:

Commandant (G-MWV)
U.S. Coast Guard
2100 2nd Street S.W.
Washington, D.C. 20593–0001
Telephone: (202) 267–0574.

You may also submit your questions to the USCG website http://www.navcen.uscg.gov/mwv/navrules/navrules.htm.

(Supersedes NTM 1(49)05) (USCG)

(50) IMPROPER USE OF STROBE LIGHTS, SEARCHLIGHTS AND DANGEROUS CARGO LIGHT.

STROBE LIGHTS: The Coast Guard has received reports of the use of white strobe lights as “anticollision” lights and as fishing net markers. A white strobe light is a distress signal in Inland Waters and prohibited under International Rules (except for use as a distress signal on life jackets). Misuse of these lights may result in civil penalties up to $5000.

SEARCHLIGHTS: Fishing vessels using searchlights while setting and recovering gear, and other vessels using searchlights, are reminded that improper use of searchlights violates both Inland and International Navigation Rules. Examples of violations include: (a) leaving searchlights lit constantly while underway, so as to interfere with visibility of navigation lights and (b) shining at other vessels so as to embarrass them and impair the night vision of other mariners.

DANGEROUS CARGO LIGHT: Warning: foreign vessels operating in the Far East, specifically in the Straits of Malacca, commonly use an all around red light to indicate carriage of a dangerous cargo. In addition, these vessels often use deck security lighting underway to deter piracy; this may obscure the vessel’s running lights. U.S. vessels transiting these areas should be aware of these practices and plan accordingly.

NOTE: This notice does not prohibit vessels from using additional lights so long as they cannot be confused with or obscure navigation lights. Mariners are cautioned that all types of high intensity lights, when used at sea, must be properly directed or adequately screened so as to not embarrass another vessel or be misinterpreted. When these lights are not being used for a specific task they should be extinguished.

(Repetition NTM 1(50)05) (USCG)

(51) GUIDELINES FOR WGS DATUM CONVERSION.

1. The following information is provided to assist navigators in converting geographic positions from World Geodetic System 1972 (WGS 72) to World Geodetic System 1984 (WGS 84) and vice versa:
   a. Positions obtained from satellite navigation systems or measured from charts referred to the World Geodetic System 1972 must be moved 0.01 minute eastward and 0.00 minute northward to be placed on the World Geodetic System 1984.
   b. Positions obtained from satellite navigation systems (or charts) referred to the World Geodetic System 1984 must be moved 0.01 minutes westward and 0.00 minutes southward to be placed on the World Geodetic System 1972.
2. Individuals who need somewhat more precise values may use the following tables to minimize the error due to the truncation of transformed coordinates.
3. Users with a need for the most accurate transformation from WGS 72 to WGS 84 may use the following transformation equations:

Latitude Shift = (4.5 cos Ø/ a sin 1") + (f sin 2 Ø/sin 1")
= 0.1455 cos Ø + 0.0064 sin 2 Ø seconds northward
Longitude Shift = 0.554 seconds eastward
Where: Ø= latitude
f = difference in flattening of the ellipsoids = 0.3121057×10^{7}
a = semi-major axis of WGS 72 ellipsoid = 6,378,135 meters.

The datum shift from WGS 84 to WGS 72 is computed using the same equation but the direction of the computed shift is reversed–e.g. the latitude shift is southward and the longitude shift is westward.

4. Since the maximum shift only amounts to approximately 17 meters in longitude and 4 meters in latitude on the ground, the shift need not be used to plot positions on charts at scales smaller than 1:50,000.

POSITIONS REFERRED TO WORLD GEODETIC SYSTEM 1972 MUST BE MOVED AS INDICATED TO BE IN AGREEMENT WITH WORLD GEODETIC SYSTEM 1984

90N	0.0000	MINUTES NORTH AND	0.0092	MINUTES EAST
85N	0.0002	MINUTES NORTH AND	0.0092	MINUTES EAST
80N	0.0005	MINUTES NORTH AND	0.0092	MINUTES EAST
75N	0.0007	MINUTES NORTH AND	0.0092	MINUTES EAST
70N	0.0009	MINUTES NORTH AND	0.0092	MINUTES EAST
65N	0.0011	MINUTES NORTH AND	0.0092	MINUTES EAST
60N	0.0013	MINUTES NORTH AND	0.0092	MINUTES EAST
55N	0.0015	MINUTES NORTH AND	0.0092	MINUTES EAST
50N	0.0017	MINUTES NORTH AND	0.0092	MINUTES EAST
45N	0.0018	MINUTES NORTH AND	0.0092	MINUTES EAST
40N	0.0020	MINUTES NORTH AND	0.0092	MINUTES EAST
35N	0.0021	MINUTES NORTH AND	0.0092	MINUTES EAST
30N	0.0022	MINUTES NORTH AND	0.0092	MINUTES EAST
25N	0.0023	MINUTES NORTH AND	0.0092	MINUTES EAST
20N	0.0024	MINUTES NORTH AND	0.0092	MINUTES EAST
15N	0.0024	MINUTES NORTH AND	0.0092	MINUTES EAST
10N	0.0024	MINUTES NORTH AND	0.0092	MINUTES EAST
5N	0.0024	MINUTES NORTH AND	0.0092	MINUTES EAST
0N	0.0024	MINUTES NORTH AND	0.0092	MINUTES EAST
5S	0.0024	MINUTES NORTH AND	0.0092	MINUTES EAST
10S	0.0024	MINUTES NORTH AND	0.0092	MINUTES EAST
15S	0.0023	MINUTES NORTH AND	0.0092	MINUTES EAST
20S	0.0022	MINUTES NORTH AND	0.0092	MINUTES EAST
25S	0.0021	MINUTES NORTH AND	0.0092	MINUTES EAST
30S	0.0020	MINUTES NORTH AND	0.0092	MINUTES EAST
35S	0.0019	MINUTES NORTH AND	0.0092	MINUTES EAST
40S	0.0018	MINUTES NORTH AND	0.0092	MINUTES EAST
45S	0.0016	MINUTES NORTH AND	0.0092	MINUTES EAST
50S	0.0015	MINUTES NORTH AND	0.0092	MINUTES EAST
55S	0.0013	MINUTES NORTH AND	0.0092	MINUTES EAST

(51) GUIDELINES FOR WGS DATUM CONVERSION. (Continued).

POSITIONS REFERRED TO WORLD GEODETIC SYSTEM 1984 MUST BE MOVED AS INDICATED TO BE IN AGREEMENT WITH WORLD GEODETIC SYSTEM 1972

60S	0.0011	MINUTES	NORTH AND	0.0092	MINUTES EAST
65S	0.0009	MINUTES	NORTH AND	0.0092	MINUTES EAST
70S	0.0008	MINUTES	NORTH AND	0.0092	MINUTES EAST
75S	0.0006	MINUTES	NORTH AND	0.0092	MINUTES EAST
80S	0.0004	MINUTES	NORTH AND	0.0092	MINUTES EAST
90S	0.0000	MINUTES	NORTH AND	0.0092	MINUTES EAST
90N	0.0000	MINUTES	SOUTH AND	0.0092	MINUTES WEST
85N	0.0002	MINUTES	SOUTH AND	0.0092	MINUTES WEST
80N	0.0005	MINUTES	SOUTH AND	0.0092	MINUTES WEST
75N	0.0007	MINUTES	SOUTH AND	0.0092	MINUTES WEST
70N	0.0009	MINUTES	SOUTH AND	0.0092	MINUTES WEST
65N	0.0011	MINUTES	SOUTH AND	0.0092	MINUTES WEST
60N	0.0013	MINUTES	SOUTH AND	0.0092	MINUTES WEST
55N	0.0015	MINUTES	SOUTH AND	0.0092	MINUTES WEST
50N	0.0017	MINUTES	SOUTH AND	0.0092	MINUTES WEST
45N	0.0018	MINUTES	SOUTH AND	0.0092	MINUTES WEST
40N	0.0020	MINUTES	SOUTH AND	0.0092	MINUTES WEST
35N	0.0021	MINUTES	SOUTH AND	0.0092	MINUTES WEST
30N	0.0022	MINUTES	SOUTH AND	0.0092	MINUTES WEST
25N	0.0023	MINUTES	SOUTH AND	0.0092	MINUTES WEST
20N	0.0024	MINUTES	SOUTH AND	0.0092	MINUTES WEST
15N	0.0024	MINUTES	SOUTH AND	0.0092	MINUTES WEST
10N	0.0024	MINUTES	SOUTH AND	0.0092	MINUTES WEST
5N	0.0024	MINUTES	SOUTH AND	0.0092	MINUTES WEST
0N	0.0024	MINUTES	SOUTH AND	0.0092	MINUTES WEST
5S	0.0024	MINUTES	SOUTH AND	0.0092	MINUTES WEST
10S	0.0024	MINUTES	SOUTH AND	0.0092	MINUTES WEST
15S	0.0023	MINUTES	SOUTH AND	0.0092	MINUTES WEST
20S	0.0022	MINUTES	SOUTH AND	0.0092	MINUTES WEST
25S	0.0021	MINUTES	SOUTH AND	0.0092	MINUTES WEST
30S	0.0020	MINUTES	SOUTH AND	0.0092	MINUTES WEST
35S	0.0019	MINUTES	SOUTH AND	0.0092	MINUTES WEST
40S	0.0018	MINUTES	SOUTH AND	0.0092	MINUTES WEST
45S	0.0016	MINUTES	SOUTH AND	0.0092	MINUTES WEST
50S	0.0015	MINUTES	SOUTH AND	0.0092	MINUTES WEST
55S	0.0013	MINUTES	SOUTH AND	0.0092	MINUTES WEST
60S	0.0011	MINUTES	SOUTH AND	0.0092	MINUTES WEST
65S	0.0009	MINUTES	SOUTH AND	0.0092	MINUTES WEST
70S	0.0008	MINUTES	SOUTH AND	0.0092	MINUTES WEST
75S	0.0006	MINUTES	SOUTH AND	0.0092	MINUTES WEST
80S	0.0004	MINUTES	SOUTH AND	0.0092	MINUTES WEST
90S	0.0000	MINUTES	SOUTH AND	0.0092	MINUTES WEST

(Repetition NTM 1(51)05) (NGA)

(52) ANTI-SHIPPING ACTIVITIES MESSAGE.

The Anti-Shipping Activities Message (ASAM) database, a part of the Maritime Safety Information Division website is a National Geospatial-Intelligence Agency service for mariners providing reports of hostile actions directed against ships. The ASAM database was developed at the request of the U.S. Interagency Working Group on Piracy and Maritime Terrorism. It contains random reports of various forms of aggression against shipping around the world. Events are categorized by date and by geographic area and are based on the NGA subregion system. The user can submit an ASAM, with the full particulars of an incident to be reported, or search the existing ASAM database by user-defined queries via the Maritime Safety Information

(52) ANTI-SHIPPING ACTIVITIES MESSAGE. (Continued).

Division website (http://pollux.nss.nga.mil). Upon receipt of the ASAM at NGA, the text is reviewed and evaluated for further action, edited, and stored in the ASAM database for access by all customers. The database can be used as a voyage planning tool by providing cautionary information to ship owners and masters concerning security conditions in and near ports and narrow channels around the world. Examples of ASAM Reports in this file include the ACHILLE LAURO incident, robberies of ships transiting the Malacca Straits, attacks on fishing boats and merchants ships coasting off Western Sahara, and certain events occurring in and around the Persian Gulf. When sending a hostile action report the user of ASAM should provide NGA with as much of the following information as is possible:

1. Date of Occurrence;
2. Geographic Location;
3. Known or Suspected Aggressor;
4. Victim (Ship's) Name;
5. A detailed description of the occurrence being reported.

For further information on the ASAM database, users may contact (301) 227-3147 or write:

MARITIME DIVISION (PVM)
ST D 44
NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
4600 SANGAMORE ROAD
BETHESDA, MD 20816-5003

Recent reports have stated there are 700 identifiable terrorist groups who have committed more than 8000 major acts of political violence since 1962. In one recent year there were 450 such actions against ships around the globe. Subregions that cover the crossroads of the world are more active with anti-shipping activities than some remote areas. **Note that the ASAM file is only an indicator of hostile actions reported to NGA and is not a complete listing of all hostile actions that have occurred worldwide.** NGA strongly urges the mariner to assist in the population of the ASAM database by sending reports of hostile actions.
(Repetition NTM 1(52)05) (NGA/PVM)

(53) CAUTION ON ANNOUNCEMENT OF NEW CHARTS AND PUBLICATIONS.

CAUTION: DO NOT USE A NEW CHART OR PUBLICATION UNTIL IT IS ANNOUNCED IN NOTICE TO MARINERS. There may be occasions when a new edition of a chart or publication is received prior to the official announcement of its release being published in Notice to Mariners. Since Notice to Mariners corrections are for specific editions of products, it is imperative that the user neither discard the previous edition nor use the new edition until this official announcement is received. Further, since Notice to Mariners corrections are for specific editions of products, it is critical that the user update only the specifically-referenced product edition. Additionally, users of the NGA website are advised that announcements of new editions in this system appear approximately one week ahead of the date of the published Notice to Mariners.
(Supersedes NTM 1(53)05) (NGA/PVM)

(54) GLOBAL POSITIONING SYSTEM (GPS) AND DIFFERENTIAL GPS (DGPS) INFORMATION.

The Global Positioning System (GPS) is a satellite-based radionavigation system with continuous worldwide coverage. It provides navigation, position, and timing information to air, marine, and land based users. GPS is operated and controlled by the Department of Defense (DoD) under Air Force management. Although originally intended for military use only, federal radionavigation policy has established that the GPS Standard Positioning Service (SPS) will be available for civil use.

GPS Initial Operational Capability (IOC) was established on December 8, 1993. At IOC, the GPS achieved its operational configuration for providing SPS. Full Operational Capability (FOC) to meet operational military functionality was achieved July 17, 1995. Computer programs are available from commercial sources so that interested users can determine the availability and quality of GPS coverage at their particular location.

The U.S. Coast Guard is the Government interface for civil users of GPS. The Coast Guard established the Navigation Information Service (NIS), as a part of the Coast Guard Navigation Center (NAVCEN) located in Alexandria, Virginia, to meet the needs of the civil user. The information provided includes planned, current or recent satellite outages, constellation

(54) GLOBAL POSITIONING SYSTEM (GPS) AND DIFFERENTIAL GPS (DGPS) INFORMATION. (Continued).

changes, user instructions and tutorials, system status, information about Coast Guard provided radionavigation systems, and information about federal radionavigation policy and systems.

Whenever possible, advance notice of GPS satellite outages will be provided by the DoD and made available by the U.S. Coast Guard. The DoD must provide at least 48-hour advance notice for any planned disruption of the Standard Positioning Service (SPS) in peacetime. The NIS advisory services are updated whenever new information is received.

NIS services are described below:

1. Watchstanders are available 24 hours to answer phones (703) 313-5900, email TIS-PF-NISWS@uscg.mil and fax (703) 313-5920. The NIS 24 hour voice recording provides access to a 90-second message of the current system status. Forecasted outages, historical outages, and other changes in the GPS are included as time permits. The NIS 24-hour voice recording phone number is (703) 313-5907.
2. The Department of Commerce transmits recorded time information on WWV/WWVH 2.5, 5, 10, 15, and 20 MHz frequencies. During the 40–second interval between time ticks, navigation information is announced by voice. Listen at minute 14 and 15 on WWV and minute 43 and 44 on WWVH for GPS status and current or forecasted outages. Internet access is available from the World Wide Web at http://www.navcen.uscg.gov.
3. The NIS disseminates GPS Advisory Broadcast Messages through USCG broadcast stations using VHF-FM voice, HF-SSB voice, and NAVTEX broadcasts. The broadcasts provide the GPS user in the marine environment with the current status of the GPS satellite constellation, as well as any planned/unplanned system outages that could affect GPS navigational accuracy. Information is provided in message format via an established system of message dissemination. NIS provides the GPS Operational Advisory Broadcast information to NGA for broadcast in NAVAREA, HYDROLANT, or HYDROPAC messages. These messages are generally geared to the deep draft mariner. NGA also publishes a Weekly Notice to Mariners (NTM) containing USCG Marine Information Broadcasts and NGA broadcast warnings for a seven–day period.

To comment on any of these services or ask questions about GPS status, contact the NIS at:
Commanding Officer
U.S. Coast Guard NAVCEN
7323 Telegraph Road
Alexandria, VA 22315-3998
NIS Phone: (703) 313-5900
Fax: (703) 313-5920

The Civil GPS Service Interface Committee (CGSIC) was established to address issues and problems that relate to the civil use of GPS. The CGSIC is the official interface between civil GPS users and the GPS operators (DoD). The CGSIC consists of a General Committee, an Executive Panel, and three Subcommittees:
1. Timing Information
2. International Information
3. U.S. States and localities

The U.S. Department of Transportation Radionavigation and Positioning Staff chairs the CGSIC. The U.S. Coast Guard Navigation Center (NAVCEN) is the deputy chair and administrator. Points of contact are:
CGSIC Executive Secretariat
Commanding Officer CGSIC
U.S. Coast Guard NAVCEN
7323 Telegraph Road
Alexandria, VA 22315-3998
Phone: (703) 313-5900
Fax: (703) 313-5920
E-mail: rebecca.m.casswell@uscg.mil

The program manager for all U.S. Coast Guard civil GPS activities is:
Commandant (G-OPN)
U.S. Coast Guard
2100 2nd St. SW
Washington, DC 20593-0001
Phone: (202) 267-0980
Fax: (202) 267-4222

(54) GLOBAL POSITIONING SYSTEM (GPS) AND DIFFERENTIAL GPS (DGPS) INFORMATION. (Continued).

Additionally, the Coast Guard Navigation Center operates the Maritime Differential GPS (DGPS) Service and the developing Nationwide DGPS (NDGPS) Service, consisting of two control centers and over 80 remote broadcast sites. The Maritime DGPS Service is a medium frequency (285 kHZ - 325 kHz), all weather, 24-hour a day augmentation to the GPS service that provides localized GPS pseudorange correction factors. DGPS Full Operational Capability (FOC) was achieved March 15, 1999. DGPS provides six second time to alarm integrity for GPS out of tolerance conditions and increased position accuracy. The specified accuracy of DGPS augmented fixes is 10 meters (2drms), though typical results are 1 to 3 meter accuracy. This service provides DGPS coastal coverage of the continental U.S., the Great Lakes, Puerto Rico/U.S. Virgin Islands, portions of Alaska and Hawaii, and a greater part of the Mississippi River Basin.

NDGPS is an expansion of the Maritime DGPS network and, when complete, this service will provide uniform differential GPS coverage of the continental U.S. and selected portions of Hawaii and Alaska regardless of terrain, man made, and other surface obstructions.

Information concerning DGPS status, including planned/unplanned system outages, is disseminated through local USCG Broadcast Notice to Mariners, NAVTEX broadcasts, and internet access at http://www.navcen.uscg.gov.

(Supersedes NTM 1(54)05) (USCG)

(55) TELEVISION ANTENNAE INTERFERENCE WITH GPS.

It has come to the attention of the U.S. Coast Guard and Federal Communications Commission that certain consumer electronics-grade active VHF/UHF marine television antennas are causing operational degradation in the performance of Global Positioning System (GPS) receivers. This interference may be realized as a display of inaccurate position information or a complete loss of GPS receiver acquisition and tracking ability.

The interference is not limited to the GPS equipment onboard the vessel with the installed active marine television antennae. There have been reports of interference occurring on other vessels and installations operating up to 2000 feet away from vessels using such antennas.

In one particular case, the interference caused the position of the vessel as displayed on the electronic chart to move erratically and dramatically often across large expanses of land. As can be expected, various data displays indicated erroneous information such as excessive speeds. In these instances, the problem would occasionally correct itself while at other times required resetting the system. To the vessel's crew, these annoyances were frustrating and caused concerns that perhaps less obvious inaccuracies were occurring. Ultimately, this affected their confidence in the performance of the GPS and Electronic Chart Display and Information System.

If you are experiencing recurring outages or degradation of your GPS receiver operation, you should perform an on-off test of your TV antenna. If turning off the power to the antenna results in improvement in the GPS receiver performance, the antenna may be the source of interference in the GPS band. In that case, you should contact the manufacturer of the antenna and identify the symptoms.

The FCC identified the following models of marine television antennas as having potential problems during the investigation of GPS interference:

a. TDP (Tandy Distribution Products) Electronics – Mini state Electronic amplified UHF/VHF TV Antenna – Models 5MS740, 5MS750, AND 5MS921.

b. Radio Shack Corporation – Long Range Amplified omni directional TV antenna - Model 15-1624.

c. Shakespeare Corporation – Seawatch - Models 2040/Code Date 02A00, 2050/Code Date 03A00 (Code dates are found on the antenna power supply).

The GPS interference problems may not be limited to the marine television models listed above. If mariners identify another marine television antenna, not listed above, with GPS interference problems contact the watchstander at the Coast Guard Navigation Information Service at TIS-PF-NISWS@uscg.mil or telephone (703) 313-5900.

(Supersedes NTM 1(55)05) (USCG)

(56) DIGITAL SELECTIVE CALLING DISTRESS ALERT.

Digital selective calling (DSC) is a capability offered with some VHF and HF maritime radios, intended to initiate calls and provide distress alert information to the U.S. Coast Guard and other rescue coordination centers. DSC is a major element of the Global Maritime Distress and Safety System (GMDSS), an International Maritime Organization-mandated telecommunications system required on vessels subject to the provisions of the Safety of Life at Sea Convention (SOLAS). All vessels should interconnect their GPS with their DSC radios to provide an accurate position in the event of sending a distress alert. The interconnection of the DSC radio with the GPS is required for SOLAS vessels and is required by the International Telecommunications Union for non-SOLAS vessels.

(56) DIGITAL SELECTIVE CALLING DISTRESS ALERT. (Continued).

Coast Guard Communications Stations operate MF and HF DSC, and can be reached using the Maritime Mobile Service Group Identity (MMSI) 003669999. The United States has not declared GMDSS Sea Areas A1 or A2 effective. Medium frequency installations are ongoing. A contract has been awarded for the installation of VHF FM DSC equipment with completion scheduled for 2006. Until then, the Coast Guard cannot receive a VHF DSC distress alert unless a mariner with a DSC-compatible radio receives an alert and relays it to the Coast Guard. Mariners receiving a VHF distress alert should attempt to contact the vessel sending the distress alert and obtain information concerning the distress, and then contact the Coast Guard to pass on this information. The Coast Guard will treat these alerts as legitimate distress calls. Continue listening on the working channel to ensure communications between the Coast Guard and ship in distress is established. Finally, be ready to provide further assistance if asked by the Coast Guard.
(Repetition NTM 1(56)05) (USCG)

(57) VESSEL SQUAT IN SHALLOW WATER.

The following discussion is primarily aimed towards mariners who are navigating ocean-going commercial vessels on approaches to ports, where water depths are beginning to shoal (less than 3 times the ship's draft). The discussion describes the phenomenon of "squat" and is intended to help mariners recognize circumstances where it could significantly affect the navigational draft of their vessels.

In August 1992, a 950-foot passenger liner ran aground in an area where the charted depth of 39 feet was more than 7 feet greater than the vessel's maximum calculated draft. One major contributing factor was that neither the master nor the pilot adequately judged the considerable squatting effect (sinkage & trim) caused by the high-speed transit (24.5 knots) in relatively shallow water (which was about 1.22 times the ship's draft).

DISCUSSION OF SQUAT: The term "squat" describes the combination of sinkage (overall settling of the hull) and trim (the bow up/down rotation of the hull). This phenomenon occurs in waters of any depth, but is particularly affected by the proximity to the sea floor. Therefore, the effects of squat become more pronounced in shallow and/or restricted waters (such as canals or dredged channels). As a ship moves forward, water must quickly flow around and under the hull to fill the void left behind. This accelerated water flow affects the pressure distribution along the hull. Consequently, the vessel squats, effectively increasing its draft and trim. Depending upon the vessel's speed and hull form, the ship may trim by either the bow or the stern. Generally, full-bodied hulls (where C_b>0.7, such as tankers) tend to trim by the bow, whereas fine-bodied hulls (such as container ships) tend to trim by the stern.

SHALLOW WATER EFFECTS: Shallow water affects a ship in two manners: squat (which increases the effective draft at bow and/or stern), and maneuverability (which reduces maneuvering responses compared to open, deep water performance). Also, the faster the vessel's speed, the greater the magnitude of the effects.

CALCULATION OF SQUAT: Squat is a function of the vessel's speed through the water, the ratio of ship draft to water depth, the ratio of cross-sectional areas of the hull and channel, the block coefficient of the hull, and other factors. Formulas for predicting squat for any particular ship are complex and may not be practical for direct use by mariners. However, a useful "rule of thumb" can be used as long as mariners understand its limitations, as discussed below.

In general, shallow water effects can begin to appear when water depth is less than 3 times the vessel's draft, and can become significant by the time water depth is less than 1.5 times the draft. For a ship in unrestricted shallow water (i.e., not within the confines of a dredged channel or canal), a conservative rule-of-thumb for estimating squat is:

$S = 0.033C_bV^2$

[where: s = squat (*ft*), V = ship speed, including any head current (*knots*), and C_b = block coefficient of hull]. For example: at 15 knots, the squat for a container ship (C_b = 0.60) proceeding against a 1-knot head current would be approximately 5.1 feet and for a tanker (C_b = 0.85) would be approximately 7.2 feet.

The estimated squat should be added to the deepest calculated draft of the vessel (bow or stern). This rule-of-thumb conservatively overestimates the squat of a ship and is therefore considered to be safe for operational decisions.

However, the above rule-of-thumb is valid only when the ship's speed is less than:

V<2.52 x *SQRT(d)*

[where V = ship speed (*kts*), and *SQRT(d)* = square root of the water depth *"d"* (*ft*)]. For example: in 50 feet of water,

(57) VESSEL SQUAT IN SHALLOW WATER. (Continued).

the above squat estimate is valid only if the ship's speed is less than 17.8 knots. As the ship moves into shallower water, the limiting speed will decrease. For example, in 30 feet of water, the limiting speed for the rule-of-thumb reduces to 13.8 knots. If the ship's speed is faster than the limiting speed, then the squat prediction is no longer reliable and a greater squat should be assumed. Therefore, if the ship maintains a constant speed as it proceeds into shallower water, it may eventually exceed the limiting speed and experience a significant increase in squat.

If the block coefficient C_b is not known, it may be approximated as follows:

$C_b = 35Disp/(LBT)$

[where Disp = full-load displacement (*long tons*), L = length between perpendiculars (*ft*), B = beam (*ft*), and T = full-load draft (*ft*)]. For example, the block coefficient C_b of a container ship 810'L x 106'B x 36'T with a full-load displacement of 51,710 Ltons is approximately 0.59.

UNDERKEEL CLEARANCE: When evaluating the underkeel clearance in shallow waters, mariners are advised to also take into account the wave-induced motions of the ship (heave and pitch), the uncertainty within their own draft & trim calculations, as well as a prudent margin for uncertainty in the charted water depths (even modern hydrographic surveys may not locate all sea floor obstructions or the shallowest depths). In particular, sudden changes in water depth (such as passing over a shoal area) can cause transient squat effects that can be more substantial than predicted. Similarly, sudden changes in ship speed (acceleration or deceleration) can also cause transient changes in squat. For broad-beamed ships with a relatively "tender" rolling periods (such as modern, post-Panamax container ships), rolling motions can significantly increase drafts at the bilges, in addition to the effects of squat.

MANEUVERABILITY: In addition to squat, the mariner should also be aware that shallow water may increase turning diameter. Modeling of tankers has shown an increase in turning diameter of 60% to 100% in water less than 1.25 times the ship's draft. Hydrodynamic effects such as yawing and sheering should also be taken into account in shallow and restricted waters, especially when passing another vessel. Also, the vessel will require substantially more revolutions to maintain the same speed (during sea trials with a 270-foot destroyer drawing 8 feet of water, the ship required 400 rpm to reach 22 knots in 100 feet of water, but nearly 500 rpm to maintain the same speed in 45 feet of water).

RESTRICTED WATERS: When the ship is transiting shallow restricted waters (such as a dredged channel within a shallow bay), the hydrodynamic flow around the hull is confined by the banks of the channel, creating a different pressure distribution and aggravating the squat condition (usually by increasing the stern squat). The squat estimated by the above "rule of thumb" should be doubled. Maneuverability is also further degraded; which is of particular concern when passing (meeting or overtaking) another vessel in the waterway or when maneuvering near banks or in channel curves.

RECOGNIZING SHALLOW WATER EFFECTS: Signs that a ship has entered shallow water conditions can include one or more of the following:

- Vibration increases suddenly,
- Engine loads down and revolutions decrease,
- Wavemaking increases, especially at the bow,
- Ship becomes more stable and slower to respond to controls,
- Echo sounders indicate a change in clearance or depth,
- The shaft horsepower (shp) speed decreases at the same engine revolutions,
- Water flow around the ship changes, and water color darkens (possibly indicating entrained mud).

REGULATIONS: The Code of Federal Regulations (CFR) requires that the person directing the movement of the vessel set the vessel's speed with consideration for the tendency of the vessel underway to squat and suffer impairment of maneuverability when there is small underkeel clearance [33 CFR 164.11(p)(3)]. In addition, the International Maritime Organization recommends that ships be provided with a bridge poster, a pilot card, and a maneuvering booklet. These should include information on the squat and maneuvering characteristics for that particular vessel [see also USCG Navigation Safety Inspection Circular 7-89].

For more information, contact:

Commandant, U.S. Coast Guard
Naval Architecture Division (G-MSE-2)
2100 Second Street S.W.
Washington, D.C. 20593-2967
Telephone: (202) 267-2988

(Repetition NTM 1(57)05) (USCG)

(58) PROMULGATION OF MARITIME SAFETY INFORMATION BY U.S. INFORMATION PROVIDERS.

The purpose of this information is to provide mariners with the details of the promulgation of Maritime Safety Information (MSI) via the Global Maritime Distress and Safety System (GMDSS) by U.S. information providers, namely the National Geospatial-Intelligence Agency (NGA), the U.S. Coast Guard (USCG), and the National Weather Service (NWS).

The equipment needed to receive MSI is a GMDSS type-approved Inmarsat-C transceiver for SafetyNET broadcasts via Inmarsat satellites and a NAVTEX receiver for Coastal Warnings. SafetyNET is an international service for the broadcast and automatic reception of MSI by means of direct printing through Inmarsat's Enhanced Group Call (EGC) system. NAVTEX is an internationally coordinated system for the automatic reception of MSI via MF 518 kHz. The area of coverage for the United States is NAVAREA/METAREA IV and XII for SafetyNET and for NAVTEX, approximately 200 nautical miles from each NAVTEX station (see graphic, page I-1.57). Additionally, the NWS is providing further coverage for NAVAREA/METAREA XVI (Peru) for weather forecasts and warnings.

The major categories of MSI in the United States for both SafetyNET and NAVTEX are:

a. navigational warnings (including electronic navigation system messages such as Loran-C and GPS)
b. meteorological warnings
c. ice reports
d. search and rescue information
e. meteorological forecasts

The following table details the scheduled times for the U.S. information providers and what types of broadcasts are being sent. For a depiction of the Inmarsat satellite footprints overprinted on the worldwide NAVAREA/METAREAS, see the graphic on page I-1.36.

In order to ensure that all relevant SafetyNET MSI is received before sailing, it is recommended that the Inmarsat-C receiver remain in operation while the ship is in port. To receive SafetyNET traffic automatically, the ship's receiver must be set up properly at the start of the voyage:

a. select the appropriate satellite (AOR-W, AOR-E, POR, IOR)
b. enter extra NAVAREA/METAREA codes in addition to the one that the vessel is currently in, if desired
c. key in the ship's position and ensure a periodic update (at least every 12 hours is recommended). This determines the NAVAREA/METAREA that will be monitored. If the position is not updated for more than 12 hours, ONLY geographically addressed messages with priorities greater than routine within the entire ocean region will be printed out.

In order to ensure that all relevant NAVTEX MSI is received before sailing, it is recommended that the NAVTEX receiver remain in operation while the ship is in port. To receive MSI automatically via NAVTEX, the ship's NAVTEX receiver must be programmed with the desired NAVTEX stations and subject identifiers.

It is intended that all NAVTEX weather be broadcast with subject indicator "B," for Meteorological Warnings, which cannot be rejected by the NAVTEX receiver, or "E" for routine forecasts. However, this cannot be fully implemented at the present time within the U.S. Therefore, all mariners in U.S. waters should program their NAVTEX receivers to include subject indicator "E" in order to receive both warnings and routine weather forecasts via NAVTEX.

The repetition rates of SafetyNET and NAVTEX messages vary, depending on the type of broadcast and situation. NAVTEX messages are generally repeated at each scheduled time slot until canceled (usually every four hours). SafetyNET weather forecast messages from the NWS normally are sent once unless an unscheduled warning is being issued, in which case an echo is used. The echo is rebroadcasted six minutes after the initial transmission to give vessels which are transmitting at the time of the initial broadcast another opportunity to receive the message.

NGA promulgates all of its SafetyNET messages (which do not have a known cancellation within 24 hours of the initial broadcast) once each day until canceled. Those messages canceling others and those with a known expiration within 24 hours are sent only once.

For search and rescue, the USCG determines the repetition of the broadcast depending upon the type of incident, area of the incident, and known potential rescue vessels.

During the ice season the USCG's International Ice Patrol, which sends SafetyNET messages concerning the status of ice in the Atlantic Ocean, sends its traffic once.

All type-approved Inmarsat SafetyNET and NAVTEX receivers are designed to suppress redundant copies of correctly copied messages.

Beginning 2004, National Weather Service hurricane advisories, and high seas forecasts containing warnings of hurricanes not forecast to occur within 48 hours, will be broadcast via SafetyNET with a priority code of "Safety" versus "Urgent".

For further discussion of GMDSS and its many aspects, users are encouraged to read the appropriate chapter in The American Practical Navigator (Bowditch) and/or in Publication 117, Radio Navigational Aids. Pub. 117 also lists in-depth worldwide GMDSS coverage. Other valuable GMDSS reference sources include:

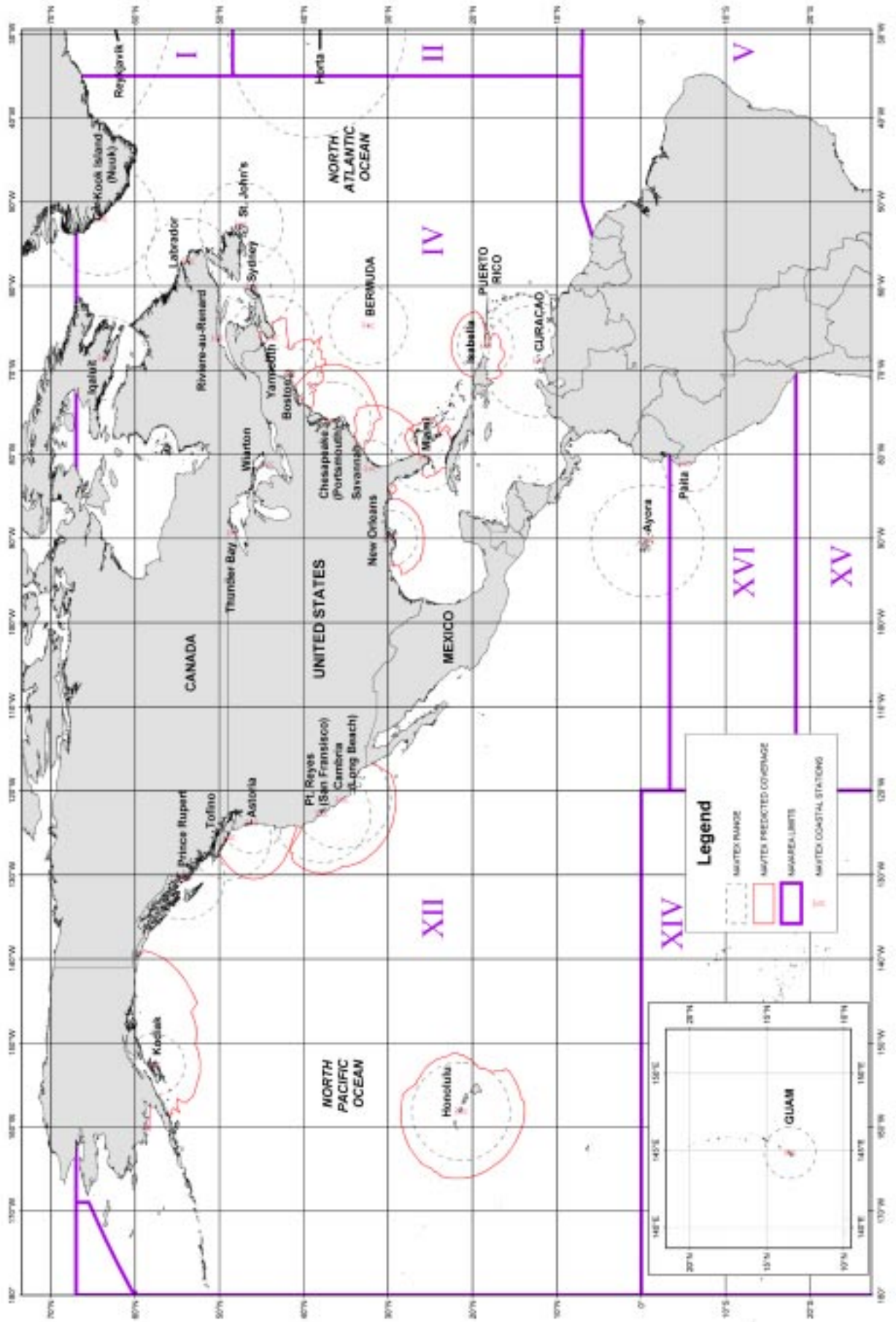
(58) PROMULGATION OF MARITIME SAFETY INFORMATION BY U.S. INFORMATION PROVIDERS. (Continued).

IMO Newsletters
NOAA Mariners Weather Log (http://www.vos.noaa.gov)
USCG Amver Bulletins
USCG Local Notice to Mariners
British Admiralty List of Radio Signals, Volumes 3 and 5
Many commercial maritime magazines

SCHEDULED BROADCAST TIMES

WHAT	WHO	WHEN (UTC)	HOW	NAVAREA/ METAREA	SATELLITE
High seas warnings and forecasts	NWS	0430, 1030, 1630, 2230	SafetyNET	IV	AOR-W
High seas warnings and forecasts	NWS	0545, 1145, 1745, 2345	SafetyNET	XII	AOR-W/POR
High seas warnings and forecasts	NWS	0515, 1115, 1715, 2315	SafetyNET	XVI	AOR-W
Hurricane advisories West Atlantic	NWS	as required	SafetyNET	IV	AOR-W
Hurricane advisories East Pacific	NWS	as required	SafetyNET	XII	POR/AOR-W
Hurricane advisories Central Pacific	NWS	as required	SafetyNET	XII	POR
Long range navigational warnings	NGA	1000, 2200	SafetyNET	IV	AOR-W
Long range navigational warnings	NGA	1030, 2230	SafetyNET	XII	POR/AOR-W
Long range search and rescue	USCG	upon receipt	SafetyNET	IV/XII	AOR-W/POR
Coastal MSI	USCG	4 to 6 times daily for routine traffic; upon receipt for distress	NAVTEX	Generally, within 200 miles of the coastline	None; see Pub 117 for stations and times
Status of ice in North Atlantic Ocean	USCG	twice daily 0000, 1200	SafetyNET	IV	AOR-W

(Repetition NTM 1(58)05) (USCG/NGA)


I
II
IV
V
XII
XIV
XV
XVI
NORTH ATLANTIC OCEAN
NORTH PACIFIC OCEAN
CANADA
UNITED STATES
MEXICO
BERMUDA
PUERTO RICO
CURACAO
Reykjavik
Horta
Kook Island (Nuuk)
St.John's
Labrador
Sydney
Iqaluit
Riviere-au-Renard
Yarmouth
Boston
Wiarton
Thunder Bay
Chesapeake (Portsmouth)
Savannah
New Orleans
Miami
Isabela
Ayora
Paita
Pt Reyes (San Fransisco)
Camerra (Long Beach)
Astoria
Tofino
Prince Rupert
Kodiak
Honolulu
GUAM
Legend

(59) COAST GUARD SAFETY INFORMATION AVAILABLE ON INTERNET.

The United States Coast Guard Navigation Information Service (NIS), operated by the USCG Navigation Center, provides information for all radionavigation and maritime telecommunications systems. The NIS is staffed 24 hours a day, 7 days a week, providing information on the current operational status, effective policies, and general information for Global Positioning System (GPS), Differential GPS (DGPS), Loran-C, Universal Shipborne Automatic Identification System (AIS), and the Global Maritime Distress and Safety System (GMDSS), including NAVTEX, Digital Selective Calling (DSC), Inmarsat SafetyNET, and other Maritime Safety Information (MSI) broadcasts. Access to this information can be made directly, at no charge, via the Internet at http://www.navcen.uscg.gov.

The NIS also disseminates Safety Broadcasts (BNM), Local Notice to Mariners (LNM) and the latest Notice Advisory to Navstar Users (NANU). NANU notices can also be obtained via e-mail subscription through the USCG Navigation Center website (http://www.navcen.uscg.gov/gps/default.htm). LNMs can also be obtained via e-mail subscription through the USCG Navigation Center website (http://www.navcen.uscg.gov/lnm/listserver.htm). In addition, the NIS investigates all reports of degraded or loss of GPS, DGPS or LORAN-C service. Mariners are encouraged to report all degradation, outages, or other incidents or anomalies of radionavigation services to the NIS via any of the following: Phone: 703-313-5900, E-mail: TIS-PF-webmasternavcen@uscg.mil, or on the World Wide Web at http://www.navcen.uscg.gov.

(Supersedes NTM 1(59)05) (USCG)

(60) NATIONAL OCEAN CLAIMS.

The following list shows national claims of maritime jurisdiction. Publication of this material is solely for information relative to the navigational safety of shipping and in no way constitutes legal recognition by the United States. The information has been compiled from the best available sources.

Country	Territorial Sea	Fisheries or Economic Zone	Contiguous Zone	Continental Shelf
Albania	12*	15	---	200m or E
Algeria	12*	32-52	24	---
Angola	12	200	24	---
Antigua and Barbuda**	12*	200	24	200NM or CM
Argentina	12* (1)	200	24	200NM or CM
Australia	12 (2)	200	24	200NM or CM
Bahamas, The**	12	200	---	200m or E
Bahrain	12	---	24	---
Bangladesh	12*	200	18 (3)	CM
Barbados	12*	200	---	---
Belgium	12	200 (4)	24	CS (4)
Belize	12 (5)	200	---	---
Benin	200	200	---	---
Bosnia and Herzegovina	--- (6)	---	---	---
Brazil	12* (7)	200 (7)	24	---
Brunei	12	200 (8)	---	---
Bulgaria	12 (9)	200	24	200m or E (9)
Burma	12* (10)	200	24 (10)	200NM or CM
Cambodia	12*	200	24 (11)	200NM

(60) NATIONAL OCEAN CLAIMS. (Continued).

Cameroon	12	200	24	---
Canada	12 (12)	200	24	200NM or CM
Cape Verde**	12*	200	24	200NM
Chile	12	200	24	200/350NM
China	12*	200 (13)	24 (13)	200NM or CS
Colombia	12	200	---	200m or E
Comoros**	12	200	---	---
Congo (Brazzaville)	200*	---	---	---
Congo (Kinshasa)	12	--- (14)	---	---
Cook Islands	12	200	---	200NM or CM
Costa Rica	12	200 (15)	---	200NM
Côte d'Ivoire	12	200	---	200NM
Croatia	12*	---	---	200m or E
Cuba	12 (16)	200	24	200m
Cyprus	12	200	24	200m or E
Denmark	12* (17)	200	24	200m or E
Djibouti	12 (18)	200	24	---
Dominica	12	200	24	---
Dominican Republic	6 (19)	200	24	200NM or CM
East Timor	12	200	24	200NM or CM
Ecuador	200 (20)	---	---	--- (20)
Egypt	12* (21)	200	24 (21)	200m or E
El Salvador	12 (22)	200	24	200NM
Equatorial Guinea	12	200	---	---
Eritrea	(23)	---	---	---
Estonia	12 (24)	--- (24)	---	---
Fiji**	12	200	24	200m or E
Finland	12*(25)	12	14	200m or E
France	12 (26)	200 (26)	24	200m or E
Gabon	12	200	24	---
Gambia, The	12	200	18	---
Georgia	--- (27)	---	---	---
Germany	12	200	---	200m or E
Ghana	12	200	24	200NM
Greece	6 (28)	---	---	200m or E
Grenada	12*	200	---	---

(60) NATIONAL OCEAN CLAIMS. (Continued).

Guatemala	12 (29)	200	---	200m or E
Guinea	12	200	---	---
Guinea-Bissau	12	200	---	---
Guyana	12*	200	---	200NM or CM
Haiti	12 (30)	200	24 (30)	E
Honduras	12 (31)	200	24	---
Iceland	12	200	---	200NM or CM
India	12*	200	24 (32)	200NM or CM
Indonesia**	12 (33)	200	---	---
Iran	12*	--- (34)	24 (34)	--- (34)
Iraq	12	---	---	CS
Ireland	12	200	---	CS
Israel	12	---	---	E
Italy	12 (35)	---	---	200m or E
Jamaica**	12	200	24	200NM or CM
Japan	12 (36)	200	24	200NM or CM
Jordan	3	---	---	---
Kenya	12 (37)	200	---	200m or E
Kiribati**	12	200	---	---
Korea, North (DPRK)	12* (38)	200	50 (38)	---
Korea, South (ROK)	12* (39)	200	24	CS
Kuwait	12	---	---	---
Latvia	12 (40)	200	---	200m or E
Lebanon	12	---	---	---
Liberia	200	---	---	---
Libya	12* (41)	74	---	CS
Lithuania	12	---	---	---
Madagascar	12	200	24	200NM (42)
Malaysia	12 (43)	200	---	200m or E
Maldives**	12*	200	24	---
Malta	12*	25	24	200m or E
Marshall Islands**	12	200	24	---
Mauritania	12 (44)	200	24	200NM or CM
Mauritius	12*	200	---	200NM or CM
Mexico	12 (45)	200	24	200NM or CM
Micronesia, Federated States of	12	200	---	---

(60) NATIONAL OCEAN CLAIMS. (Continued).

Monaco	12	---	---	---
Morocco	12	200	24	200m or E
Mozambique	12	200	---	---
Namibia	12	200	24	200NM or CM
Nauru	12	200	24	---
Netherlands	12* (46)	200	---	---
New Zealand	12 (47)	200 (47)	24	200NM or CM
Nicaragua	12*	200	24	---
Nigeria	12	200	---	200m or E
Niue	12	200	---	---
Norway	12 (48)	200	24 (48)	200NM or CM
Oman	12*	200	24	---
Pakistan	12* (49)	200	24 (49)	200NM or CM
Palau	3	200	---	---
Panama	12(50)	200	24	200NM or CM
Papua New Guinea**	12	200	---	200m or E
Peru	200 (51)	---	---	200
Philippines**	--- (52)	200	---	E
Poland	12 (53)	200 (53)	---	---
Portugal	12 (54)	200	24	200m or E
Qatar	12	--- (55)	24	CS
Romania	12*	200	24	200m or E
Russia	12 (56)	200	24	200m or E
Saint Kitts and Nevis	12	200	24	200NM or CM
Saint Lucia	12	200	24	200NM or CM
Saint Vincent and the Grenadines**	12*	200	24	---
Samoa	12	200	24	---
Sao Tome and Principe**	12	200	---	---
Saudi Arabia	12 (57)	---	18 (57)	CS
Senegal	12	200	24	200NM or CM
Serbia and Montenegro	12	---	---	---
Seychelles**	12*	200	24	200NM or CM
Sierra Leone	12	200	24	200NM
Singapore	3	---	---	---
Slovenia	12* (58)	---	---	---
Solomon Islands**	12	200	---	200NM

(60) NATIONAL OCEAN CLAIMS. (Continued).

Somalia	200*	---	---	---
South Africa	12	200	24	200NM or CM
Spain	12 (59)	200 (59)	24	---
Sri Lanka	12* (60)	200	24 (60)	200NM or CM
Sudan	12*	---	18 (61)	200m or E
Suriname	12	200	---	---
Sweden	12 (62)	200	---	200m or E
Syria	12*	---	24	200m or E
Tanzania	12	200	---	---
Thailand	12 (63)	200	---	---
Togo	30	200	---	---
Tonga	12 (64)	200	---	200m or E
Trinidad and Tobago **	12	200	24	200NM or CM
Tunisia	12 (65)	---	24	---
Turkey	(66)	200 (66)	---	---
Tuvalu	12	200	24	---
Ukraine	12 (67)	200	---	200m or E
United Arab Emirates	12*	200 (68)	24	200NM or CM
United Kingdom	12	200 (69)	---	Defined by coordinates
United States	12	200 (70)	24	200NM or CM
Uruguay	12 (71)	200	24	200NM or CM
Vanuatu **	12	200	24	200NM or CM
Venezuela	12	200	15 (72)	200m or E
Vietnam	12* (73)	200	24 (73)	200NM or CM
Yemen	12* (74)	200	24 (74)	200NM or CM

Abbreviations:

CS - Continental Shelf (no specified limits)
CM - Continental Margin
E - Limit of Exploitation
m - meters (depth)
NM - nautical miles

* Indicates a state which requires advance permission or notification for innocent passage of warships in the territorial sea. The United States does not recognize this requirement.

** Indicates an archipelagic state.

FOOTNOTES

Security Zone - A state claim to control activity beyond its territorial sea for security reasons unrelated to that state's police powers in its territory, including its territorial sea. This Summary lists only those Security Zones which presently claim to restrict navigation and overflight activities conducted exclusively beyond their claimed territorial seas. A claim of right of surveillance beyond the territorial sea or a claim of the right of "hot pursuit" in enforcing violations of law which occur in a

(60) NATIONAL OCEAN CLAIMS. (Continued).

state's territorial sea, inland waters, or land territory does not constitute a claimed Security Zone.

Fishery zones not extending beyond a claimed territorial sea or EEZ are encompassed within the territorial sea or EEZ and not listed separately.

Many coastal nations have established straight baselines or have asserted historic waters claims. These footnotes mention some of the more significant ones. It exceeds the scope of this Summary, however, to provide an exhaustive list of baseline and historic waters claims. Accordingly, users should refer to other sources of information to obtain a complete compendium of maritime claims.

1. Argentina. Claims San Matias Gulf (Golfo San Matias), Nuevo Gulf (Golfo Nuevo) and San Jorge Gulf (Golfo San Jorge) as internal waters and claims, jointly with Uruguay, the Rio de la Plata estuary as internal waters.

2. Australia. Claims Anxious, Rivoli, Encounter and Lacepede Bays as historic waters.

3. Bangladesh. Contiguous Zone also considered a Security Zone. Nuclear-powered vessels and vessels transporting nuclear materials or other radioactive substances are required to give notice prior to entering territorial sea.

4. Belgium. EEZ limits set by coordinates found in the Act concerning the EEZ of Belgium in the North Sea of April 1999. Fishery zone and CS extend to median line equidistant from baseline of neighbors.

5. Belize. From the mouth of the Sarstoon River to Ranguana Cay, Belize's territorial sea is 3NM; according to Belize's Maritime Areas Act, 1992, the purpose of this limitation is "to provide a framework for the negotiation of a definitive agreement on territorial differences with the Republic of Guatemala."

6. Bosnia and Herzegovina. No information on maritime claims is available.

7. Brazil. Claims to require permission for more than 3 warships of same flag to be in territorial sea at same time. Military exercises can be carried out in EEZ only with Brazil's consent.

8. Brunei. 200NM or median EEZ.

9. Bulgaria. In territorial sea and internal waters, foreign submarines shall be required to navigate on the surface. Innocent passage of warships limited to designated sea lanes. CS limits will be established by agreement between states with adjacent or opposite coasts on Black Sea on basis of international law.

10. Burma. Claims as internal waters all waters inside a 223NM baseline closing Gulf of Martaban as well as waters inside straight baselines connecting coastal islands. Contiguous Zone also considered a Security Zone.

11. Cambodia. Contiguous Zone also considered a Security Zone.

12. Canada. Claims as internal waters all waters between its islands in the Arctic; also claims Hudson Bay as a historic bay.

13. China. Claims right to create safety zone around any structure in EEZ, right to require prior authorization to lay submarine cables and pipelines, and right to broad powers to enforce laws in the EEZ. Contiguous Zone also considered a Security Zone.

14. Congo. EEZ limits to be fixed in coordination with neighboring states.

15. Costa Rica. Permit required for foreign flag fishing vessels to transit Costa Rican waters.

16. Cuba. Claims straight baselines enclosing varying distances of water between Cape Frances (Cabo Frances), the Isle of Pines (Isla de la Juventud) (notable are those enclosing 21-35.6N and 79-50.5W), Breton Cay (Cayo Breton) and Cape Cruz (Cabo Cruz) as internal waters.

(60) NATIONAL OCEAN CLAIMS. (Continued).

17. Denmark. No prior notification required in straits, unless more than 3 warships at once. Includes Greenland and Faroe Islands. Straight baselines have the effect of enclosing waters between the Faroe Islands. Drogden and Hollænderdyb claimed as internal waters. 3NM territorial sea for Greenland. 12NM territorial sea for Faroe Islands.

18. Djibouti. Nuclear-powered vessels and vessels transporting nuclear materials or other radioactive substances are required to give notice prior to entering territorial sea.

19. Dominican Republic. Claims Samana, Ocoa, Neiba, Escocesa and Santo Domingo Bays as historic bays; Samana, Ocoa and Neiba bays qualify as juridical bays.

20. Ecuador. Straight baselines have the effect of enclosing waters between the Galapagos Islands. Claims right to enforce environmentally-based navigational restrictions in the vicinity of the Galapagos. Beyond 200NM, CS claimed along the undersea Carnegie Ridge (measured 100 miles from the 2500m-depth isobath).

21. Egypt. Contiguous Zone also considered a Security Zone. Claims right to prior permission for entry of nuclear-powered vessels or vessels carrying nuclear materials and foreign ships carrying hazardous or other wastes.

22. El Salvador. Claims Gulf of Fonseca (Golfo de Fonseca) as a historic bay.

23. Eritrea. No information on maritime claims is available.

24. Estonia. Nuclear-powered ships must apply for permission 30 days in advance to enter territorial sea. Innocent passage prohibited for ships carrying radioactive materials, explosives and marine pollutants defined as hazardous and certain oil and fertilizer products unless those cargoes are loaded or unloaded in an Estonian port. Fishery zone limits to be fixed in coordination with neighboring states.

25. Finland. In the Gulf of Finland territorial sea is 3NM.

26. France. Territorial sea limits apply to all French dependencies. EEZ claim includes the following French dependencies: Clipperton Island, French Guiana, French Polynesia, French Southern and Antarctic Lands, Guadeloupe, Glorioso Islands, Juan de Nova Island, Europa Island, Bassas da India, Martinique, New Caledonia, St. Pierre and Miquelon, Tromelin Island, and Wallis and Futuna.

27. Georgia. No information on maritime claims is available.

28. Greece. Territorial airspace claim extends to 10NM for control of civil aviation.

29. Guatemala. Claims Gulf of Amatique (Bahia de Amatique) as a historic bay.

30. Haiti. Draws territorial sea limits in a manner which implies straight baselines including across the mouth of the Gulf of Gonave (Golfe de la Gonave). Contiguous Zone also considered a Security Zone.

31. Honduras. Claims Gulf of Fonseca (Golfo de Fonseca) as a historic bay.

32. India. Contiguous Zone also considered a Security Zone. Claims Gulf of Mannar and Palk Bay as historic waters.

33. Indonesia. Submarines must navigate above water level and show national flag. Nuclear vessels and vessels carrying nuclear material must carry documents and adhere to international special preventative measures.

34. Iran. Claims security jurisdiction in Contiguous Zone. Fishery zone and CS extend to median line equidistant from baseline of neighbors.

35. Italy. Claims the Gulf of Taranto (Golfo di Taranto) as a historic bay.

(60) NATIONAL OCEAN CLAIMS. (Continued).

36. Japan. Claims straight baselines. A high seas corridor remains in 5 “international straits”: Tsugaru Strait (Tsugaru-kaikyo), La Perouse Strait, Osumi Strait (Osumi-kaikyo) and East and West channels of Tsushima.

37. Kenya. Established straight baseline system. Claims Ungwana Bay as a historic bay.

38. Korea, North (DPRK). Measures claims from claimed straight baselines, not coastline. Claims a 50/200NM Security Zone within which all foreign vessels and aircraft are banned without permission; it extends to 50NM in the Sea of Japan and to the limit of EEZ in the Yellow Sea.

39. Korea, South (ROK). Claims straight baselines. A high seas corridor remains in Korea Strait.

40. Latvia. Banned foreign warships with nuclear powered engines or cargo from entering territorial seas or ports without providing 30 days prior notice and permission.

41. Libya. Claims the Gulf of Sidra as a historic bay. All merchant ships required to give prior notice of innocent passage.

42. Madagascar. CS 200NM or 100NM from 2500m-depth isobath.

43. Malaysia. Prior authorization requirement for nuclear-powered ships or ships carrying nuclear material to enter the territorial sea.

44. Mauritania. Claims 89NM straight baseline from Cape Blanc (Cap Blanc) to Cape Timiris (Cap Timiris).

45. Mexico. No more than 3 foreign warships will be authorized in Mexican ports on each coast at the same time, and no more than one in any given port. Port calls by more than one training vessel can be authorized only if permission is requested three months in advance. Nuclear-powered and nuclear-armed ships are not allowed to enter Mexican territorial waters or dock in Mexican ports.

46. Netherlands. Considers the Westerschelde internal waters through which passage requires prior permission. Includes Aruba and the Netherlands Antilles.

47. New Zealand. Includes Tokelau. Prohibits entry of nuclear-powered and nuclear armed ships into its ports.

48. Norway. Territorial sea claim includes Jan Mayen and Svalbard. Contiguous Zone claim applies only to Norway.

49. Pakistan. Foreign supertankers, nuclear-powered ships and ships carrying nuclear materials are required to give prior notification for entry into territorial sea. Contiguous Zone also considered a Security Zone.

50. Panama. Claims Gulf of Panama as a historic bay.

51. Peru. 200 mile territorial sea is without prejudice to freedom of international communication, “in conformity with the laws and treaties ratified by the state.”

52. Philippines. In addition to its claim of archipelagic waters, claims as maritime territorial waters areas embraced within the lines described in the 1898 Treaty of Paris as subsequently modified. The resulting territorial sea varies from one-half to 285NM in width.

53. Poland. Claims a closing line across Gulf of Gdansk and a fishing zone to the median line in the Baltic. EEZ is determined by lines connecting extreme points of specified lateral limits.

54. Portugal. Established straight baselines for various areas along continental coast and Madeira and Azores island groups. Claims Tagus and Sado estuaries and associated bays as historic waters.

55. Qatar. Extends to median line with neighboring states.

(60) NATIONAL OCEAN CLAIMS. (Continued).

56. Russia. In a Joint Statement with Ukraine declared that the Sea of Azov and Strait of Kerch are historic internal waters of the two nations.

57. Saudi Arabia. Claims power to regulate nuclear-powered vessels in the territorial sea and to require prior authorization for such vessels. Contiguous Zone also considered a Security Zone.

58. Slovenia. Foreign warships require 24-hour advance notice for innocent passage through territorial sea and must use designated sea lanes only.

59. Spain. Claims to control transit passage by aircraft and exercise pollution control over vessels in international strait. Claims 200NM Economic Zone in Atlantic only.

60. Sri Lanka. Contiguous Zone also considered a Security Zone. Claims Palk Bay, Palk Strait and Gulf of Mannar as historic waters.

61. Sudan. Contiguous Zone also considered a Security Zone.

62. Sweden. Territorial sea claim is less than 12NM (but varying) in certain areas of the Skagerrak, the Kattegat and the Baltic.

63. Thailand. Claims inner Gulf of Thailand as a historical bay to 12°35'45"N.

64. Tonga. Claims 12NM territorial sea for Minerva Reef.

65. Tunisia. Claims straight baselines enclosing Gulf of Tunis (Khalij Tunis) and Gulf of Gabes (Khalij Gabes) as internal waters.

66. Turkey. Claims a 12NM territorial sea in the Black Sea and in the Mediterranean and a 6NM territorial sea in the Aegean. EEZ is claimed in the Black Sea.

67. Ukraine. In a Joint Statement with Russia declared that the Sea of Azov and Strait of Kerch are historic internal waters of the two nations.

68. United Arab Emirates. EEZ extends to agreed CS boundaries or to median lines.

69. United Kingdom. Fishery claims include Ascension, Bermuda, British Virgin Islands, Cayman Islands, Ducie and Oeno Atolls, Henderson Island, Pitcairn Island, St. Helena, Tristan da Cunha, Turks and Caicos Islands. Has also established a fishing zone around the Falkland/Malvinas Islands; although 200NM wide, the zone is only enforced to a distance of 150NM.

70. United States. EEZ applies to Northern Marianas (consistent with the Covenant), American Samoa, Guam, Puerto Rico, U.S. Virgin Islands and other U.S. possessions and territories.

71. Uruguay. Claims, jointly with Argentina, the Rio de la Plata estuary as internal waters.

72. Venezuela. Claims 15NM Security Zone.

73. Vietnam. Claims half of the Gulf of Tonkin as historic internal waters and uses straight baselines for measuring the territorial sea. Baselines purport to enclose portions of the South China Sea up to approximately 75NM in width as internal waters. Contiguous Zone also considered a Security Zone.

74. Yemen. Claims notice requirement for warships, nuclear-powered vessels and vessels transporting nuclear materials or other radioactive substances prior to entering the territorial sea. Contiguous Zone also considered a Security Zone.
(Supersedes NTM 1(60)05) (DEPT. OF STATE)

(61) U.S. ECONOMIC SANCTIONS.

Imagine a vessel transporting a shipment from South America to various ports-of-call along the Atlantic seaboard. The vessel is northbound for a final destination at a large Mid-Atlantic port in the United States. As the vessel makes its way through the Caribbean, it stops in various locations, including Santiago de Cuba in order to perform minor repairs.

Upon leaving Santiago de Cuba, the vessel continues north, for its primary destination in the United States. In accordance with U.S. law, the vessel provides advanced identification to the final port of entry. Upon learning that the vessel has just left Cuban territory, the vessel is instructed that it will not be allowed to enter any U.S. port for a period of 180 days.

The captain of the vessel unsuccessfully appeals to U.S. customs officials that the vessel contains a full shipment of produce that requires unloading within ten days.

The end result: a container ship full of spoiled produce, a financial loss for the importers and exporters, a captain that must answer for his or her actions, and a ship that will be barred from further commerce in the United States for the next six months. Furthermore, if the ship is owned or managed by a U.S. citizen or company, penalties could be assessed for having scheduled the stop in Cuba.

This is but one example of the potential consequences of disregarding U.S. economic and trade sanctions. These sanctions are based on U.S. foreign policy and national security goals and are administered and enforced by the U.S. Treasury Department's Office of Foreign Assets Control, or "OFAC." Currently, OFAC administers sanctions programs against certain targeted foreign countries, as well as terrorists, international narcotics traffickers, proliferators of weapons of mass destruction and others.

This paragraph provides an overview of OFAC, including a review of current sanctions programs, enforcement and licensing regimes and reporting procedures and requirements. U.S. sanctions programs are subject to change, and this overview serves merely as a "snap-shot" of current programs. For additional information or questions on sanctions, including program updates and changes, we recommend visiting the OFAC website at http://www.treas.gov/ofac or contact the Office of Compliance Outreach and Implementation at 1-800-540-6322.

OFAC JURISDICTION

So who, exactly, is subject to OFAC jurisdiction?

OFAC regulations apply to the following groups: *All U.S. citizens and permanent resident aliens located anywhere in the world, any individual located in the United States, U.S. –registered vessels and other vessels subject to U.S. jurisdiction, all companies organized in the United States, all foreign branches and representative offices of U.S. companies, as well as all individuals and entities located in the United States (including domestic affiliates of foreign companies). Foreign subsidiaries of U.S. companies are also subject to the U.S. sanctions against Cuba and North Korea. As was seen in the example above, however, all shipping companies are potentially affected by OFAC regulations.*

OFAC's jurisdiction is broad and individuals or companies subject to OFAC jurisdiction are generally prohibited from providing trade facilitation, maritime transportation, vessel chartering, brokerage services, and maritime insurance or reinsurance involving the following:

- Shipments of goods or technology where the country of origin is subject to trade sanctions;
- Shipments of goods to or from countries or targets subject to trade sanctions;
- Export of U.S.-origin vessels to countries subject to trade sanctions;
- Carriage of passengers to or from Cuba;
- Carriage of passengers who are blocked Cuban nationals;
- Shipments of goods or technology in which there is an interest of a target government or a Specially Designated National (SDN) or, in the case of Cuba, an interest of any Cuban national;
- The purchase of services or bunkering at ports located within the territory of a country subject to trade sanctions;
- Transshipments through the United States of cargo from or destined for countries or targets subject to trade sanctions;
- Shipments aboard vessels owned or controlled by sanctioned countries or targets.

Now, you might say to yourself: "I've read the definitions, and I'm not sure they apply to me." In this respect, it is important to note that U.S. sanctions programs vary, and what may be prohibited with regard to one sanctions target may be permitted or licensable for another. Sanctions programs are subject to frequent change. To ensure continued compliance, it is important that individuals and entities remain up-to-date on the latest prohibitions.

One might mistakenly assume, based on the definitions above, that a foreign subsidiary of a U.S. company is *not* subject to OFAC sanctions programs against countries that do not concern them like Cuba and North Korea. This is a dangerous assumption. All foreign subsidiaries of U.S. companies must comply with sanctions against Cuba and North Korea. Additionally, any person or entity under OFAC jurisdiction is prohibited from facilitating or assisting foreign companies (e.g.,

(61) U.S. ECONOMIC SANCTIONS. (Continued).

as financiers, brokers, or other intermediaries) with transactions in which they themselves could not participate directly. Meaning, even if a foreign subsidiary is not under OFAC jurisdiction, the U.S. parent company could risk committing a violation if it uses the foreign subsidiary to broker, facilitate or engage in any transaction with a sanctions target.

"But what if I work for a foreign company? Aren't I exempt from these sanctions?"

No. If you are a U.S. citizen or permanent resident alien, then you are prohibited from engaging in unauthorized transactions on behalf of your employer, regardless of whether the employer is a U.S. or foreign company.

Finally, a vessel may be subject to U.S. jurisdiction, depending on its ownership or location. If your vessel meets any of the following definitions it is subject to U.S. jurisdiction, and hence, OFAC regulations:

- It is a U.S. flag vessel;
- It is owned or controlled by any U.S. company or companies;
- It is within U.S. waters;
- In accordance with sanctions against Cuba and North Korea, the vessel is owned or controlled by foreign subsidiaries of U.S. companies.

OFAC LICENSING

OFAC has the authority to authorize transactions that are prohibited by issuing licenses to allow certain transactions. For some sanctions programs, OFAC may license commercial exports of agricultural commodities, medicine and medical devices. Limited provisions also exist for licensing the exportation of other items, including civil aviation equipment. OFAC's licensing unit generally reviews all license applications on a first-in, first-out, case-by-case basis and issues or denies licenses based on U.S. foreign policy and national security interests. The OFAC licensing unit can be reached by telephone (202) 622-2480 and by fax (202) 622-1657. If an export transaction is licensed by OFAC, then U.S. persons are authorized to engage in transactions incident and necessary to the licensed export. Incident and necessary transactions could include: brokering, freight forwarding, shipping, insuring and certain forms of financing.

GENERAL TRADE RESTRICTIONS BY PROGRAM

The sanctions administered by OFAC are imposed, modified, or lifted based on U.S. foreign policy and national security objectives, and therefore, each sanctions regime tends to have restrictions and nuances that vary in terms of the types of transactions prohibited and the scope of the program in general. The following summary provides a broad overview of trade sanctions administered by OFAC as of December 2005. While a few programs target entire countries, most of these sanctions programs target specific persons and do not include general restrictions on all cross-border trade.

For many sanctions programs the exportation or importation of information and informational materials, which includes most books, magazines, and other publications; prerecorded video and audio tapes; and CD-ROMs, is exempt from the scope of the prohibitions. In many cases humanitarian donations of articles, such as food, clothing and medicine, are also exempt. Note that certain transactions that are not prohibited by OFAC may be subject to licensing or notification requirements from/to other U.S. government agencies (e.g., the Departments of Commerce or State or U.S. Coast Guard).

Balkans- There are no comprehensive restrictions on exports to or imports from this region. Nevertheless, the sanctions prohibit exportation or reexportation of goods, services or technology to specifically designated persons, including indicated war criminals and those persons deemed to be destabilizing the Western Balkans region. Also prohibited are financial transactions, importation of goods, services or technology and brokering or other facilitation of trade with such designated persons; and dealing in property in which such designated persons have an interest. These individuals can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below).

Burma (Myanmar)- The following are prohibited: new investment that includes the economic development of resources in Burma; importation into the United States of items of Burmese origin; exportation of financial services to Burma; dealing in property in which any listed Burmese entity (currently including the three main Burmese financial institutions) has an interest. These institutions can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below). There are no general restrictions on the export of U.S. origin goods to Burma. Transactions that are incident and necessary to such exports, including payment and the export of financial services, are authorized by general license.

(61) U.S. ECONOMIC SANCTIONS. (Continued).

Cuba- The following are prohibited: exportation or reexportation of goods, services, or technology to Cuba, except items licensed by the U.S. Department of Commerce (current Commerce licensing policy includes case-by-case licensing of agricultural and medical exports); importation of goods or services from Cuba; dealing in Cuban-origin goods or in property in which the Government of Cuba or a Cuban national has an interest; brokering of Cuban trade contracts; use, brokering, or insuring of Cuban-owned vessels. In addition, absent OFAC authorization, no vessel that enters a Cuban port to engage in an unauthorized trade of goods or the purchase of services may enter a U.S. port to load or unload freight for a period of 180 days following departure from Cuba. No vessel carrying goods or passengers to or from Cuba or carrying goods in which Cuba or a Cuban national has an interest may enter a U.S. port with such goods or passengers on board. Unauthorized travel-related transactions to, from, and within Cuba are prohibited.

Diamond Trading- This program restricts the direct or indirect import and export of rough diamonds not controlled through the Kimberly Process Certification Scheme (KPCS). Shipments of rough diamonds imported into the United States from a KPCS participating country or exported from the United States to a KPCS participating country must be accompanied by a Kimberley Process Certificate and sealed in a tamper-resistant container. For complete information on the KPCS certificate and other restrictions on the trade of rough cut diamonds, please review the information available at: http://www.treas.gov/offices/enforcement/ofac/sanctions/t11diam.pdf.

Iran- In general, the following transactions are prohibited: exportation or reexportation of goods, services, or technology to Iran; direct or indirect importation of goods or services from Iran; dealing in Iranian-origin goods and transactions that involve the trading of Iranian oil or petroleum products, or transactions that would benefit the Iranian petroleum industry. In addition, facilitation of transactions with Iran and brokering of unauthorized Iranian trade contracts are expressly prohibited. Broad exceptions are made via general license for the importation of foodstuffs intended for human consumption (that are classified under chapters 2-23 of the Harmonized Tariff Schedule of the U.S.) and carpets and other textile floor coverings (that are classified under chapter 57 or heading 9706.00.60 of the Harmonized Tariff Schedule of the U.S.). Exports of agricultural commodities, medicine, or medical equipment may be licensed by OFAC on a case-by-case basis.

Iraq- There is no general restriction on exports to or imports from Iraq. Nevertheless, the sanctions prohibit: exportation or reexportation of goods, services or technology to designated family members, supporters and members of the regime of former President Hussein; importation of goods, services or technology and brokering or other facilitation of trade with such designated persons; dealing in property in which such designated persons have an interest. These individuals can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below).

Liberia- There is no general restriction on exports to Liberia. Nevertheless, the sanctions prohibit: exportation or reexportation of goods, services or technology to designated family members, supporters and members of the regime of former President Charles Taylor; importation of goods, services or technology and brokering or other facilitation of trade with such designated persons; dealing in property in which such designated persons have an interest. These individuals can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below). The program also includes a specific ban on the importation of Liberian origin lumber.

Narcotics Trafficking- The sanctions prohibit the following: exportation or reexportation of goods, services or technology to designated narcotics traffickers; importation of goods, services or technology and brokering or other facilitation of trade with such designated entities; dealing in property in which such designated persons have an interest. These entities can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below).

Nonproliferation- OFAC currently administers two separate sanctions programs against proliferators of weapons of mass destruction. The first level of sanctions prohibit the importation of goods, technology, or services produced or provided by certain foreign persons designated by Secretary of State for having promoted the proliferation of weapons of mass destruction. Additionally, on June 28, 2005, the President signed Executive Order 13382, designating several organizations and their supporters in Iran, North Korea and Syria as proliferators of WMD. Under these sanctions, the following transactions are prohibited: exportation or reexportation of goods, services or technology to designated proliferators of WMD technology; importation of goods, services or technology and brokering or other facilitation of trade with such designated entities; and dealing in property in which such designated persons have an interest. The entities designated under this program can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below).

(61) U.S. ECONOMIC SANCTIONS. (Continued).

North Korea- Although the sanctions against North Korea are still technically in place, nearly all transactions are authorized pursuant to various general licenses. However, goods of North Korean origin may not be imported into the United States either directly or through third countries, without prior notification to and approval from OFAC.

Sudan- In general, the following transactions are prohibited: exportation or reexportation of goods, services, or technology to Sudan; importation of goods or services from Sudan; and dealing in Sudanese-origin goods or in property in which the Government of Sudan has an interest. In addition, facilitation of foreign nationals' transactions with Sudan and brokering of Sudanese trade contracts is expressly prohibited. Exports of agricultural commodities, medicine, or medical equipment may be licensed by OFAC on a case-by-case basis.

Syria- The Department of Commerce enforces a ban on the unauthorized exportation of products of the United States to Syria. OFAC-implemented sanctions with respect to Syria prohibit the receipt of unlicensed donations from the Government of Syria by U.S. persons and participation in any financial transaction with the Government of Syria that poses a risk of furthering terrorist acts in the United States. In addition, the sanctions prohibit: exportation or reexportation of goods, services or technology to persons determined to be contributing to the Government of Syria's harboring of terrorists, its military presence in Lebanon; its pursuit of weapons of mass destruction; and its undermining of stabilization efforts in Iraq; importation of goods, services or technology and brokering or other facilitation of trade with such designated persons; and dealing in property in which such designated persons have an interest. These individuals can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below). There is no general ban on imports into the United States from Syria.

Terrorists- The sanctions prohibit the following: exportation or reexportation of goods, services or technology to designated terrorists and terrorist networks; importation of goods, services or technology and brokering or other facilitation of trade with such designated entities; dealing in property in which such designated persons have an interest. These entities can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below).

Zimbabwe- There is no general restriction on exports to or imports from Zimbabwe. Nevertheless, the sanctions prohibit: exportation or reexportation of goods, services or technology to persons designated as undermining Zimbabwe's democratic processes or institutions; importation of goods, services or technology and brokering or other facilitation of trade with such designated persons; dealing in property in which such designated persons have an interest. These individuals can be found on OFAC's list of Specially Designated Nationals and Blocked Persons (see below).

Specially Designated Nationals And Blocked Persons (SDNs)- As part of its enforcement efforts, OFAC designates individuals, entities and companies owned or controlled by, or acting for or on behalf of, sanctions targets. OFAC publishes a list of these designations, as well as of individuals, groups, and entities, such as terrorists, narcotics traffickers and proliferators of WMD technology designated under programs that are not country-specific. Collectively, such individuals and companies are called "Specially Designated Nationals" or "SDNs." U.S. persons are generally prohibited from dealing with SDNs and any property or assets in which an SDN has an interest must be blocked if under the control of a U.S. person. OFAC also publishes a list of vessels owned or controlled by sanctioned countries or other targets.

KEEPING CURRENT ON OFAC SANCTIONS PROGRAMS

OFAC's public information documents are updated whenever there is a change to an existing program, or when a new program is announced. Although OFAC does not maintain a mailing list, a "starter kit" of essential OFAC information is available on the OFAC website and from OFAC's fax-on-demand service. This information can be very helpful to a company in the initial stages of developing or incorporating OFAC compliance procedures into existing export controls. Corporations may keep current with OFAC sanctions programs via the following user-friendly electronic resources:

On the Internet- All of OFAC's program "brochures," as well as SDN information, are available free in downloadable Adobe Acrobat© PDF format on the OFAC website. Under the "Contents" heading, the date of OFAC's last change is displayed next to the "Financial Operations Bulletin" heading and the "SDN and Blocked Persons" heading. Additionally, the "Recent Actions" file summarizes the latest sanctions developments. Access is also provided to statutes, United Nations resolutions, Executive orders, and regulations under the "Legal Documents" heading. Users have the opportunity to subscribe to Listserv Operations and Actions Bulletins. OFAC's website is www.treas.gov/ofac.

(61) U.S. ECONOMIC SANCTIONS. (Continued).

OFAC Fax-on-demand Service- OFAC operates a free automated fax-on-demand service, which can be accessed 24 hours a day, seven days a week, by dialing (202) 622-0077 from any touch tone phone and following voice prompts. The index lists all of the documents OFAC makes available by fax, and indicates the date each document was last updated.

OFAC File Transfer Protocol server- OFAC maintains many of its critical files, such as the SDN list in a variety of formats, on a File Transfer Protocol (FTP) server run by the Government Printing Office. This server can be accessed at: ftp://fedbbs.access.gpo.gov. OFAC also maintains its own FTP server, accessible at: ftp://ofacftp.treas.gov. Both servers will accept anonymous logins.

SANCTIONS ENFORCEMENT

OFAC's outreach to the public is a fundamental element in deterring violations of economic sanctions as well as educating exporters on the current status of OFAC programs. OFAC works to encourage public compliance with these programs through public speaking engagements and by providing updated, publicly-available sanctions information.

Any U.S. person who believes that a violation of the sanctions has occurred is encouraged to report these transactions to OFAC. Self-disclosures of violations may be submitted to:

Office of Foreign Assets Control
Attn: Enforcement
U.S. Department of the Treasury
1500 Pennsylvania Ave, NW
Washington, DC 20220

If a member of the public learns of possible violations of sanctions, OFAC will extend confidential treatment to an incoming report. Calls may be placed to OFAC's Enforcement unit at (202) 622-2430.

In the event a violation has occurred, OFAC will take enforcement action at a level deemed appropriate to the circumstances. Not every sanctions violation is equal and there are numerous mitigating circumstances taken into consideration when making enforcement decisions. Warning letters may be used in lieu of civil or criminal penalties in instances where the transaction may be of a technical or other low-level impact to overall sanctions policy or the circumstances surrounding the occurrence warrant no further OFAC action. More serious violations may result in civil and/or criminal penalties.

The existence of a sanctions compliance program at the time of a violation or the implementation of one after detecting a violation is a mitigating factor for OFAC to consider in resolving a civil enforcement case. Other factors such as self-disclosure, first-time or inadvertent violations are also considered and may reduce the amount of a penalty. At the same time, aggravating factors such as second or repeat offenses, willful blindness, negligence or the lack of a compliance policy are taken into consideration in determining a penalty.

QUESTIONS (THE OFAC HOTLINE)

OFAC does not require your company to establish any particular internal OFAC-related compliance procedures, but the potential damage to national security, the substantial civil and criminal penalties, as well as the company's reputation should alert you to the importance of incorporating an appropriately tailored OFAC compliance program into your company's existing compliance program. If your company has any questions regarding OFAC-administered sanctions programs, OFAC compliance, or questions about specific trade transactions (past, present, or future); please call OFAC's Compliance Hotline at 1-800-540-6322. Compliance Officers are available to help you on weekdays from 7:00 a.m. until 7:00 p.m. eastern time. Comments or questions may also be posted via OFAC's website. OFAC has a Miami branch office with a special bi-lingual hotline relating to information on the Cuban sanctions, which can be reached at (786) 845-2829. If you have questions regarding this article or OFAC regulations, you may contact the Compliance Division of the Office of Foreign Assets Control at 1-800-540-6322 or fax at (202) 622-2426.

NOTE: *This overview is meant to alert mariners to potential issues arising under U.S. sanctions and does not have the force of law. Reference should be made to the controlling legal authorities to determine the applicability of specific prohibitions, exceptions, and licensing provisions. The regulations governing OFAC sanctions programs are found in chapter V of title 31, Code of Federal Regulations. Prior to the issuance of regulations, a new OFAC sanctions program is governed by the relevant Presidential Executive order imposing sanctions and delegating implementation authority to the Secretary of the Treasury.*

(Supersedes NTM 1(61)05) (DEPT. OF TREASURY)

(62) MARITIME INDUSTRY REPORTING OF A SUSPECTED OR ACTUAL TERRORIST INCIDENT

In addition to oil and hazardous substance releases, the National Response Center (NRC) must be notified of any suspected or actual terrorist incident (e.g., chemical, radiological, biological, or etiological discharge into the environment) anywhere in the United States and its territories, particularly one affecting transportation systems. Coast Guard units that receive reports of suspected or actual incidents should ensure such reports are reported to the NRC at 800-424-8802 or (202) 267-2675. Individuals are encouraged to visit the NRC website (http://www.nrc.uscg.mil) for reporting requirements and other helpful information.
(Repetition NTM 1(62)05) (USCG)

(63) ELECTRONIC VESSEL NOTICE OF ARRIVAL (NOA) SUBMISSION.

The National Vessel Movement Center (NVMC) has developed two new methods for electronic submission of Notice of Arrival information, commonly referred to as the e-NOA. One method uses an Extensible Markup Language (XML) schema, and the other uses a web interface. The web interface can be accessed via a link on the NVMC website: http://www.nvmc.uscg.gov. More information can be obtained about the XML schema by contacting the NVMC point of contact (POC) listed below. Although use of the e-NOA is optional, all maritime stakeholders (e.g., vessel agents, masters, owners, and operators) are strongly encouraged to take advantage of these new submission methods. The e-NOA represents the next phase in making the NOA submissions more efficient.

The e-NOA aids the U.S. Coast Guard in reviewing and processing of NOA information by: speeding input of NOA data into the U.S. Coast Guard's Ship Arrival Notification System (SANS); ensuring that the information is in an easy-to-read format; and facilitating the process of sharing of data with other federal agencies. It reduces the burden on industry by: offering an easy-to-use submission method; allowing for previous e-NOA entries to be copied and used again for future submissions; and providing submitters with an electronic receipt acknowledging the submission has been received by the NVMC.

An accurate and complete e-NOA satisfies the requirements of the NOA regulations in 33 CFR 160, subpart C. Therefore, the maritime industry will not be required to make duplicate submissions of NOA information to the U.S. Coast Guard.

The maritime industry may find e-NOA technical details (that is, creating e-NOA accounts, issues concerning connectivity, use of browsers, etc.) on the web by visiting the address listed above.

The U.S. Coast Guard is interested in receiving the maritime industry's feedback about the usability of the e-NOA. If members of the industry have comments or suggestions, they may send them via e-mail to sans@nvmc.uscg.gov.

The NVMC POC for the e-NOA is LT Tom Philbrick, who may be reached at (304) 264-2678. The U.S. Coast Guard Headquarters POC for all other NOA issues is LTJG Julie Miller, who may be reached at (202) 267-2562.
(Supersedes NTM 1(63)05) (USCG)

(64) AMERICA'S WATERWAY WATCH.

The U. S. Coast Guard and the Coast Guard Auxiliary have established a national awareness program called America's Waterway Watch that asks those who work, live, or recreate on or near the water to be aware of suspicious activity that might indicate threats to our country's homeland security. Americans are urged to adopt a heightened sensitivity toward unusual events and individuals they may encounter in or around ports, docks, marinas, riversides, beaches, or communities.

Anyone observing suspicious activity is asked to note details and contact the National Response Center at 1-877 24 WATCH (9-2824) or 1-800-424-8802. In the case of immediate danger to life or property, call local authorities at 911. The Coast Guard cautions people not to approach or challenge anyone acting in a suspicious manner.

Suspicious activities include:

- People appearing to be engaged in surveillance of any kind;
- Unattended vessels or vehicles in unusual locations;
- Lights flashing between boats;
- Unusual diving activity;
- Unusual number of people onboard a vessel;
- Unusual night operations;
- Recovering or tossing items into/onto the waterway or shoreline;
- Operating in or passing through an area that does not typically have such activity.

Watch for vessels and individuals in locations:

- Under and around bridges, tunnels, or overpasses;
- Near commercial areas or services like ports, fuel docks, cruise ships, or marinas;

(64) AMERICA'S WATERWAY WATCH. (Continued).

- Near industrial facilities like power plants and oil, chemical, or water intake facilities;
- Near military bases and vessels, other government facilities, or security zones.

More information, downloadable file of brochures, decals, posters, and wallet size cards are available at: http://www.uscg.mil/hq/g-m/mp/AWW_Website/index.htm. For more information about the America's Waterway Watch program, contact CPO Penny Collins at (202) 267-0724 or LT Kenneth Washington at (202) 267-0029.
(Repetition NTM 1(64)05) (USCG)

(65) RECOMMENDATIONS ON DIGITAL SELECTIVE CALLING (DSC) TEST CALLS TO COAST STATIONS.

The International Telecommunications Union and International Maritime Organization have indicated that excessive test calls on MF/HF DSC distress and safety frequencies are overloading the system to the point where interference to distress and safety calls has become a cause for concern. To minimize possible interference, live testing on DSC distress and safety frequencies with coast stations should be limited to once a week. See http://www.imo.org/includes/blastDataOnly.asp/data_id%3D9567/35.pdf.
(Repetition NTM 1(65)05) (USCG)

(66) LOSS OF INMARSAT-C SAFETY MESSAGES.

This advisory notifies users of Inmarsat-C ship earth stations that urgent marine information, weather warning and navigational warning broadcast messages, distress-related messages, as well as routine messages may be lost if a printer is not connected to and maintained with the Inmarsat-C terminal, or if floppy drive maintenance is not regularly performed on the terminal. Additionally, certain non-GMDSS-approved software (e.g., windows-based software) may freeze up if this maintenance is not performed. See http://www.uscg.mil/hq/g-m/moa/docs/4-04.htm.
(Repetition NTM 1(66)05) (USCG)

(67) U.S. COAST GUARD CHANGES HF LONG RANGE CALLING FREQUENCIES.

Effective 010001Z JAN 05, the United States Coast Guard changed its high frequency long range single sideband voice contact channels to the following Global Maritime Distress and Safety System frequencies: 4125, 6215, 8291, 12290, and 16420 kHz.

These frequencies are intended for initial contact or safety purposes only. The shore station will reply on the same frequency and arrange mutually satisfactory working frequencies if required.

Watchkeeping on 4134, 6200, 8240, 12242 and 16432 kHz (ITU channels 424, 601, 816, 1205 and 1625) ceased this date.
(Repetition NTM 1(67)05) (USCG)

(68) AUTOMATIC IDENTIFICATION SYSTEM.

Automatic Identification System (AIS) is a digital VHF radio communication system that relies upon an open, standardized, internationally agreed to protocol (SOTDMA - Self-Organizing Time-Division Multiple Access) that permits two-way exchange of navigation and safety information (e.g. identity, position, course, speed, destination, status, etc.) between ships, and, shore stations; in a continuous, autonomous, and, near real-time (2-180 sec.) manner. AIS is mandatory on all tankers, passenger vessels, or other ships of 300 gross tons or more on international voyage (SOLAS V/19.2.4). The U.S. Coast Guard has expanded upon this international requirement to include all commercial self-propelled vessels 65 feet or more in length (except fishing and small passenger vessels), towing vessels 26 feet or more in length and exceeding 600 horsepower, or, any vessel certificated to carry 150 or more passengers for hire—when these vessels are navigating in specified Vessel Traffic Service areas (33 CFR §164.46).

WARNING: AIS data can be invaluable; however, as with any source of navigation information; it should not be solely relied upon in making navigational and collision-avoidance decisions. Further, while AIS allows for safety related ship-to-ship text messaging to communicate with others and make passing arrangements, these communications do not meet the requirements of the Vessel Bridge-to-Bridge Radiotelephone Act (33 U.S.C. 1201 et seq.) for broadcasts on the designated radio channel, nor do they relieve a vessel operator from the Navigation Rules requirement to sound whistle signals or display signals.

ADVISORY: The Coast Guard has noticed (as have other authorities) that many AIS users are not updating their unit to accurately reflect voyage related information—navigation status, static draft, destination, ETA, etc. Further, the Coast Guard has encountered AIS units that either do not transmit at all or improperly transmit the vessel's dynamic data—position, course,

(68) AUTOMATIC IDENTIFICATION SYSTEM. (Continued).

speed, heading, etc. The former problem requires due diligence on behalf of the user, the latter is most likely due to the improper installation or operation of external sensors—gyro or heading device and vessel GPS system—inputted into the AIS. AIS users are compelled to properly operate their AIS at all times and should pay close attention to these matters. Improper operation of AIS could subject the user to U.S. civil penalties not to exceed $25,000.

To report a problem or for further information regarding AIS, including our plans to extend carriage requirements, visit: www.navcen.uscg.gov/enav/ais.

(USCG)

(69) CELLULAR TELEPHONE USE FOR MARITIME DISTRESS NOTIFICATION.

Cellular telephone ownership and coverage areas have expanded greatly in recent years. Many areas in the coastal maritime environment have some cellular service coverage. The Coast Guard has seen a significant increase in distress notifications via cellular telephone call from the mariner.

The Coast Guard urges mariners to regard cellular telephone capability as a backup to, not a replacement for, VHF-FM radio capability. While the Coast Guard responds to cellular calls the same as any other distress notification, cellular telephones have a number of inherent disadvantages when used in a maritime search and rescue environment. These include:

- Other mariners in the local area cannot hear the call;
- Maritime coverage areas for cellular service are sporadic since most coverage is not designed to cover the marine environment;
- To contact a Coast Guard unit directly, the caller must have a list of phone numbers;
- 911 operators may or may not know proper procedures for handling a maritime distress case;
- Responding rescue forces cannot use direction finding equipment to locate the distressed mariner.

If a mariner makes a distress call by cellular telephone, in addition to the information requested for any distress notification (such as location, type of vessel, type of distress, number of persons, etc.), it is important that the mariner also provide his/her cellular telephone number and a land based backup number.

(USCG)

(70) DISCOLORED WATER.

Discolored water is an area of seawater having a color distinctly different from the surrounding water. These observations will normally be of seawater having a color other than the blues and greens typically seen. Variations of the colors – including red, yellow, green and brown, as well as black and white – have been reported. This may be due to dumping (pollution), the existence of shoals, or underwater features such as submerged volcanoes. In near-shore areas, discoloration often results from disturbance of sediment, e.g., disturbances by propeller wash. Discolorations may appear in patches, streaks, or large areas and may be caused by concentrations of inorganic or organic particles or plankton.

In normally deep waters, discolored water can be a strong indication of undersea growth of coral reefs, submerged volcanoes, seamounts, pinnacles and the like. As these features grow in size and dimension, their only indication may be in the form of discolored water on the surface of the sea. Mariners must be prudent in such waters, as they will normally be in areas that are not well surveyed and outside of established routes for oceangoing vessels.

NGA does not maintain a database of such occurrences worldwide. In areas of active submerged volcanoes, discolored water is a common occurrence and all such reports are charted or included in a Notice to Mariners correction. Mariners are urged to submit new reports of discolored water to the nearest NAVAREA Coordinator via coast radio stations (for NAVAREA IV and NAVAREA XII, by e-mail to navsafety@nga.mil). Reports can also be submitted via the NGA Maritime Safety Information Web site (http://pollux.nss.nga.mil/sugg/sugg_form.html).

The legend “Discolored water” appears on many NGA charts, particularly those of the Pacific Ocean where underwater volcanic action is known to occur. In such areas, shoal water or discolored water may suddenly appear where only deep water has been historically depicted. Most of these legends remain on the charts from the last century, when very few deep sea soundings were available and less was known about the causes of discolored water. Few reports of discolored water have proved on examination to be caused by shoals. Nonetheless, due to the isolated areas normally in question, mariners should always give prudent respect to what may lie beneath the surface.

(70) DISCOLORED WATER. (Continued).

Today, such reports can be compared with the accumulated information for the area concerned. A more thorough assessment can be made using imagery if the water conditions and depth (roughly less than 100 feet) allow.

Mariners are therefore encouraged, while having due regard to the safety of their vessels, to approach sightings and areas of discolored water to find whether or not the discoloration is due to shoaling. If there is good reason to suppose the discoloration is due to shoal water, a report should be made as noted above.

Volcanic activity. On occasion, volcanic eruptions may occur beneath the surface of the water. These submarine eruptions may occur more frequently and may be more widespread than has been suspected in the past. Sometimes the only evidence of a submarine eruption is a noticeable discoloration of the water, a marked rise in sea surface temperature, or floating pumice. Mariners witnessing submarine volcanic activity have reported trails of steam with a foul sulfurous odor rising from the sea surface and unusual sounds heard through the hull, including shocks resembling a sudden grounding. A subsea volcanic eruption may be accompanied by rumbling and hissing, as hot lava meets the cooler sea.

In some cases, reports of discolored water at the sea surface have been investigated and found to be the result of newly-formed volcanic cones on the sea floor. These cones can grow rapidly and constitute a hazardous shoal in only a few years

Variations in Color. The normal color of the sea in the open ocean in middle and low latitudes is an intense blue or ultramarine. The following variations in appearance occur elsewhere:

- In coastal regions and in the open sea at higher latitudes, where the minute floating animal and vegetable life of the sea (plankton) is in greater abundance, the blue of the sea is modified to shades of green and bluish-green. This discoloration results from a soluble yellow pigment discharged by the plant constituents of the plankton.
- When plankton is found in dense concentrations, the color of the organisms themselves may discolor the sea, giving it a more or less intense brown or red color. The Red Sea, Gulf of California, the region of the Peru Current, South African waters, and the Malabar Coast of India are particularly liable to this variation, seasonally.
- Plankton is sometimes exterminated suddenly by changes in sea conditions, producing a dirty brown or grayish-brown discoloration. This occurs on an unusually extensive scale at times off the Peruvian coast, where the phenomenon is called “Aguaje.”
- Larger masses of animate matter, such as fish spawn or floating kelp may produce other kinds of temporary discoloration.
- Mud carried down by rivers produces discoloration which, in the case of the great rivers, may affect a large sea area, such as the Amazon River outfall. Soil or sand particles may be carried out to sea by wind or dust storms, and volcanic dust may fall over a sea area. In all such cases, the water is more or less muddy in appearance.
- Submarine earthquakes may also produce mud or sand discoloration in relatively shallow water, and crude oil has sometimes been seen to gush up. The sea may be extensively covered with floating pumice after a volcanic eruption.
- Isolated shoals in deep water may make the water appear discolored, the color varying with the depth of the water. The play of the sun and cloud on the sea may often produce patches appearing at a distance convincingly like shoal water.

Visibility. The distance at which coral reefs can be seen is dependent upon the observer’s height of eye, the state of the sea, and the relative position of the sun. When the sea is glassy calm, it is extremely difficult to distinguish the color difference between shallow and deep water. The best conditions for sighting reefs result from a relatively high position, with the sun above 20 degrees elevation and behind the observer, and a sea ruffled by a slight breeze. Under these conditions, with a height of eye of 10-15 meters it is usually possible to sight patches at a depth of less than 6-8 meters from a distance of a few hundred yards.

The use of polarized lenses is strongly recommended, as they make the variations in color of the water stand out more clearly.

If the water is clear, patches with depths of less than 1 meter will appear to be light brown in color; those with depths of 2 meters or more appear to be light green, deepening to a darker green for depths of about 6 meters, and finally to a deep blue for depths over 25 meters. Cloud shadows and shoals of fish may be quite indistinguishable from reefs, but it may be possible to identify them by their movement.

(70) DISCOLORED WATER. (Continued).

The edges of coral reefs are usually more uniform on their windward or exposed sides and are therefore more easily seen, while the leeward sides are frequently characterized by detached coral heads that are more difficult to see clearly. Water over submerged coral reefs is normally a light blue.

Due to the uncertainty of what discolored water may indicate, mariners are always urged to exercise extreme caution when in its vicinity. New reports of discolored water should be reported immediately with resulting chart, publication and radio/satellite warnings issued as appropriate.

(NGA/PVM)